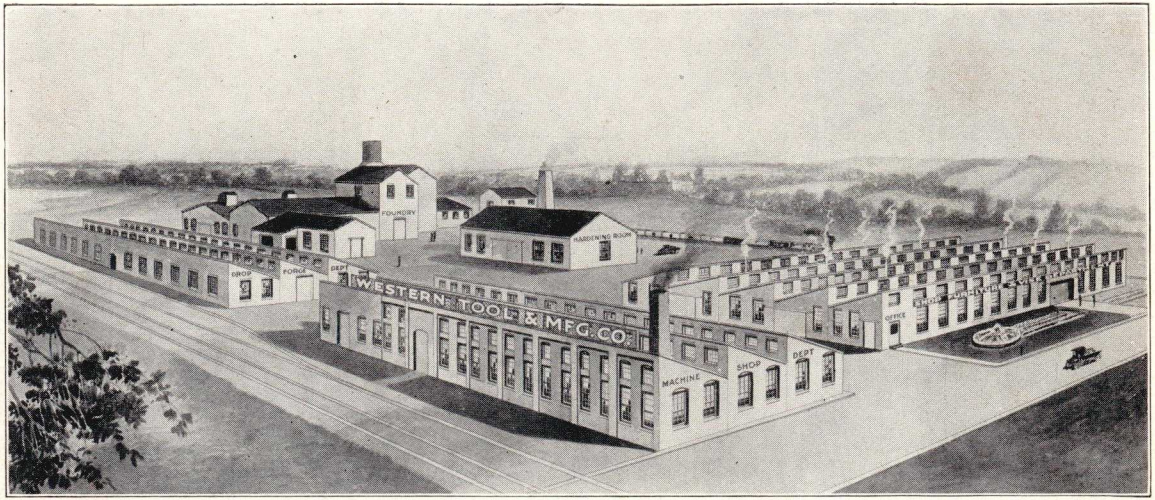
THE WESTERN TOOL & MFG CO.

SPRINGFIELD, OHIO
U.S.A.

Expanding Mandrels
Tool Holders
Lathe Dogs, 'C' Clamps
Shop Furniture
Emery Wheel Dressers
Vises

CATALOG No. 19



OUR plant, after twenty years of conservative growth, is now as complete as any plant of its kind in America. We have our own drop-forge and foundry departments modernly equipped. Our tool holders, with the patented "under support", are well and favorably known the world over. Our vises are "built to a standard", and our line of shop furniture is the largest and most complete made.

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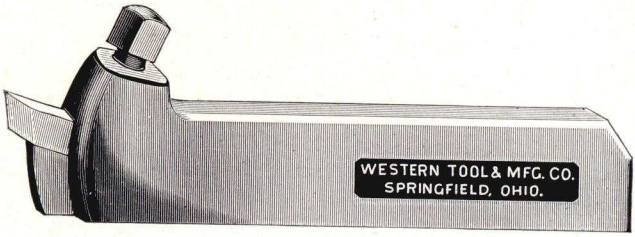
Champion Tool Holder



The excellence of the Champion Tool Holder is in the patented support—the sturdy construction—the unbreakable set-screw—and the quality of the material and workmanship.

Features of Superiority.

Our Tool Holder is made of steel, drop-forged and thoroughly case-hardened. Has patented "under-support" and is equipped with an unbreakable "MAC-IT" set-screw.

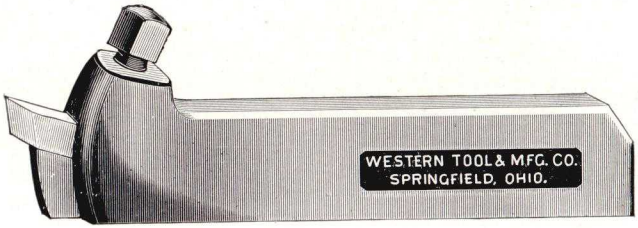
The protruding "under-support" gives 40 to 70 per cent more bearing for the cutter than any other tool holder. This increase of bearing surface allows a corresponding increase in cutter economy.

High Speed Steel is brittle; the more bearing the less breakage.

The under support absorbs the heat from the cutter and permits a heavier cut.

The Champion Tool Holder IS Superior.

Champion Turning Tool



Patented

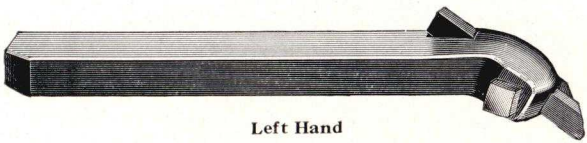
Price List of These Tools, Including High Speed Cutter and Drop-Forged Wrench.

No. Straight	No. Right Hand	No. Left Hand	Sizes of Offset. (Straight two inches shorter)	Size of Cutter	Price	Extra Cutters
0	0-R	0-L	$\frac{3}{8}$ x $\frac{7}{8}$ x 7	$\frac{1}{4}$ in. square	**$2.85**	
1	1-R	1-L	$\frac{1}{2}$ x $1\frac{1}{8}$ x 8	$\frac{9}{16}$ in. square	**3.25**	Price of Steel is changing
2	2-R	2-L	$\frac{5}{8}$ x $1\frac{3}{8}$ x 9	$\frac{3}{8}$ in. square	**4.00**	
3	3-R	3-L	$\frac{3}{4}$ x $1\frac{5}{8}$ x 10	$\frac{7}{16}$ in. square	**5.40**	
4	4-R	4-L	$\frac{7}{8}$ x $1\frac{3}{4}$ x 11	$\frac{1}{2}$ in. square	**6.90**	
5	5-R	5-L	1 x 2 x 12	$\frac{5}{8}$ in. square	**9.75**	Ask for Prices
6	6-R	6-L	$1\frac{1}{4}$ x $2\frac{1}{4}$ x 14	$\frac{3}{4}$ in. square	**13.50**	
7	7-R	7-L	$1\frac{1}{2}$ x $2\frac{1}{2}$ x 16	$\frac{7}{8}$ in. square	**22.50**	
8	8-R	8-L	2 x $2\frac{3}{4}$ x 18	1 in. square	**33.00**	

We carry a full line of High Speed Steels in bar or tool holder lengths. Specify "ALTA." It is the best.

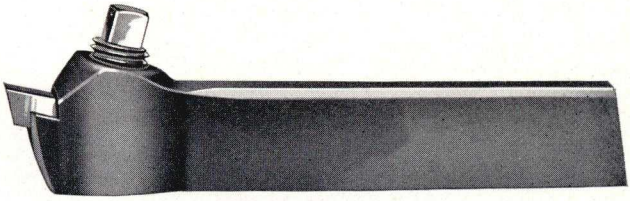
NOTE.—Support under cutter prevents chattering and snapping of steel. Carries heat from cutter.

Right Hand



Left Hand

Champion Turning Tool



Patented

With Large Set-Screw.

For all-around work this tool is unexcelled.

Has support on the sides of the cutter as well as on the bottom.

The solid support enables a much heavier cut to be made than by any other holder on the market.

The head is low and has proper angle on the face to insure clean, curling chips.

The rake of the cutter is of the proper degree for rapid and economical work.

Special attention is called to the clamp screw used on 500 to 505 style Turning Tools.

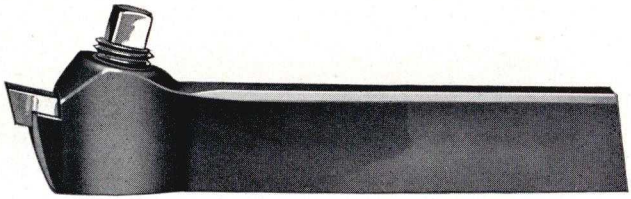
It is made of tool steel, tempered.

The base being of smaller diameter than root of thread, prevents burring, which is sure to occur if an ordinary set-screw were used.

The large diameter of the screw gives it extra clamping and holding power.

This tool will save its cost several times in a month.

Champion Turning Tools



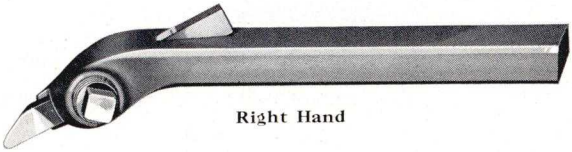
Patented

Price List of These Tools, Including High Speed Cutter and Drop-Forged Wrench.

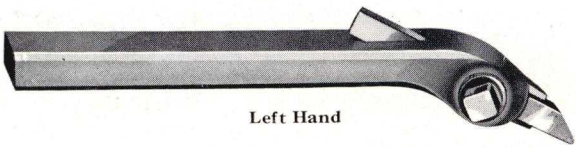
No. Straight	No. Right Hand	No. Left Hand	Sizes of Offset (Straight one inch shorter)	Size of Cutter	Price	Extra Cutters
501	501-R	501-L	½ x 1 x 8	$\frac{5}{16}$ in. square	$2.15	Price of steel is changing Ask for Prices
502	502-R	502-L	⅝ x 1¼ x 9	⅜ in. square	2.70	
503	503-R	503-L	¾ x 1½ x 10	$\frac{7}{16}$ in. square	3.60	
504	504-R	504-L	⅞ x 1¾ x 12	½ in. square	4.60	
505	505-R	505-L	1 x 2 x 14	⅝ in. square	5.85	

The special features of this tool are extra large set-screws and support on sides as well as on bottom.

We carry a full line of High Speed Steels, square and beveled stock.

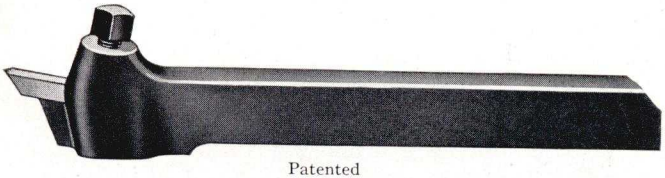


Right Hand



Left Hand

Champion Tool Holder



Patented

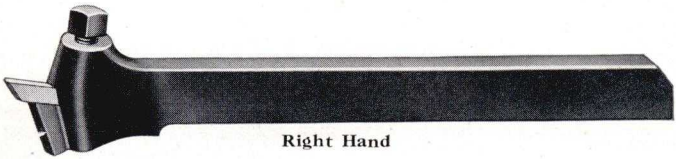
This Tool Holder is for European Lathes or wherever a square shank is required.

It is made in straight, in right and left; has our patented support under cutter. Offsets are bent at an angle of 45 degrees.

Price List of These Tools, Including High Speed Cutter and Drop-Forged Wrench.

No. Straight	No. Right Hand	No. Left Hand	Sizes of Offset (Straight two inches shorter)	Size of Cutter	Price	Extra Cutters
40	50-A	60-A	½ x ½ x 7	$\frac{3}{16}$ in. square	**$2.60**	
41	51-A	61-A	⅝ x ⅝ x 8	¼ in. square	**2.75**	Price of
42	52-A	62-A	¾ x ¾ x 9	$\frac{5}{16}$ in. square	**3.00**	Steel is
43	53-A	63-A	⅞ x ⅞ x 10	⅜ in. square	**3.75**	changing
44	54-A	64-A	1 x 1 x 11	$\frac{7}{16}$ in. square	**5.00**	
45	55-A	65-A	1⅛ x 1⅛ x 12	½ in. square	**6.50**	Ask for
46	56-A	66-A	1¼ x 1¼ x 14	⅝ in. square	**9.25**	prices
47	57-A	67-A	1½ x 1½ x 16	¾ in. square	**15.00**	

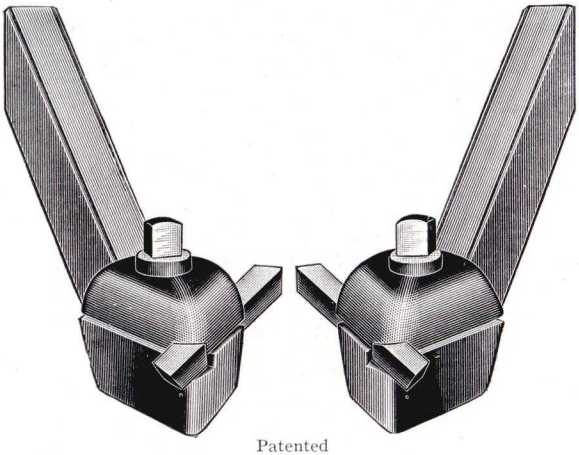
We carry a full line of High Speed Steels.



Right Hand

Left Hand

Champion Two-Way Turning Tool



Patented

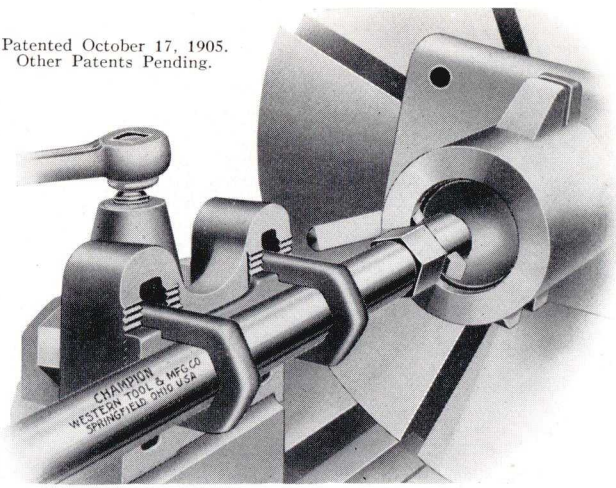
Two tools in one—a right and left hand tool for about the price of one.

Price List, Including High Speed Cutter and Drop-Forged Wrench.

No.	Size of Holder	Size of Cutter	Price Complete	Extra Cutters
221	½ x 1⅛ x 8	$\frac{5}{16}$ inch square	$4.00	Ask for prices
222	⅝ x 1⅜ x 9	⅜ inch square	5.25	
223	¾ x 1⅝ x 10	$\frac{7}{16}$ inch square	6.50	We have the best.
224	⅞ x 1¾ x 11	½ inch square	8.00	

Champion Boring Tool

Patented October 17, 1905.
Other Patents Pending.



Tool consists of Holder, one Bar with Cutter allowing a straight and a 45 degree adjustment, one High Speed Cutter and Wrench.

No.	Size of Shank	Size of Bar	Range of Bars	Size of Cutter	Price Complete
140	3/8 x 1 3/4 in.	5/8 diam. x 12 in.	1/8 to 5/8 in.	1/4 in.	**$7.00**
141	1/2 x 1 3/4 in.	7/8 diam. x 14 in.	3/16 to 7/8 in.	5/16 in.	**8.25**
142	5/8 x 2 in.	1 1/8 diam. x 16 in.	1/4 to 1 1/8 in.	3/8 in.	**10.50**
143	3/4 x 2 1/4 in.	1 1/4 diam. x 18 in.	5/16 to 1 3/4 in.	7/16 in.	**12.75**
144	7/8 x 2 3/8 in.	1 1/2 diam. x 20 in.	3/8 to 1 1/2 in.	1/2 in.	**18.00**
145	1 x 2 1/2 in.	1 3/4 diam. x 24 in.	1/2 to 1 3/4 in.	5/8 in.	**24.00**

NOTE.—No. 145 will take in bars from 1 3/4-inch down to 1/2-inch. No bushing required.

Extra Bars Carry One High Speed Cutter and One Drop-Forged Wrench.

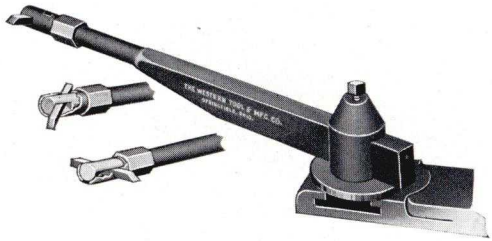
Size of Bar	Size of Cutter	Price	Size of Bar	Size of Cutter	Price
1/2 x 10 in.	3/16 in. square	**$2.60**	1 x 15 in.	3/8 in. square	**$6.00**
5/8 x 12 in.	1/4 in. square	**3.75**	1 1/8 x 16 in.	3/8 in. square	**7.50**
3/4 x 13 in.	1/4 in. square	**4.50**	1 1/4 x 18 in.	7/16 in. square	**8.60**
7/8 x 14 in.	5/16 in. square	**5.25**	1 1/2 x 20 in.	1/2 in. square	**9.75**
			1 3/4 x 24 in.	5/8 in. square	**15.00**

NOTE.—Fits regular tool post by removing ring only.

1 1/4" up are made of tubing, cutter being held by a rod.

We carry a full line of High Speed Steels. Let us quote you.

Champion Inside Tool Holder



Patented

No Set of Tool Holders Complete Without This One.

A most convenient and useful tool for boring and inside thread cutting.

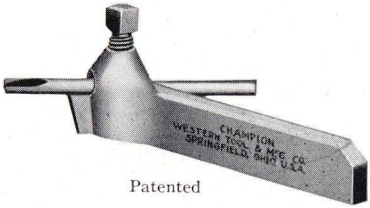
The holders are of good length, which admits of reaching well into the work.

The cutters are set on an angle so as to give a good shearing cut. Cutters can also be changed from a straight to a 45 degree angle by loosening nut and turning sleeve half round.

Price List, Including High Speed Cutter and Drop-Forged Wrench.

No.	Size of Bar	Size of Cutter	Price	Extra Cutters
51	½ x 1 x 12 in.	3/16 in. square	**$4.50**	
52	5/8 x 1¼ x 13 in.	¼ in. square	**5.25**	
53	¾ x 1⅜ x 14 in.	¼ in. square	**6.00**	Ask for Prices
54	⅞ x 1½ x 15 in.	5/16 in. square	**7.50**	
55	1 x 1⅝ x 17 in.	⅜ in. square	**9.00**	
56	1¼ x 2 x 19 in.	7/16 in. square	**12.00**	
57	1½ x 2½ x 24 in.	½ in. square	**18.00**	

Champion Boring Tool



Patented

Indispensable for Tool Room.

This tool possesses quite a number of distinct advantages.

It is light in weight and easily handled.

It is quick of adjustment.

It will hold various sizes and shapes of bars, drills, reamers, or square stock.

At the low prices we are offering this tool you can well afford to place one with each of your lathes.

Price List, Including High Speed Cutter and Drop-Forged Wrench.

No.	Size of Holder	Size of Forged Steel Bar	Price
180	3/8 x 3/4 x 4	3/8 x 4	$3.00
181	1/2 x 1 x 5	1/2 x 5	3.75
182	5/8 x 1 1/4 x 6	5/8 x 6	4.50
183	3/4 x 1 3/8 x 7	3/4 x 7	6.00

Please ask for prices on cutters.

We carry in stock High Speed Steels, every variety.

Champion Boring Tool

For Use in Lathes Having a Clamp Tool Post.

The great popularity of our line of CHAMPION BORING TOOLS, and the urgent demand on the part of our customers for the best Boring Bar on the market, has led to the development of this improved holder for use on lathes having a clamp tool post.

The V-shaped block holds rigidly and allows a large range of bars without the need of bushings, etc. No additional cost over the ordinary block.

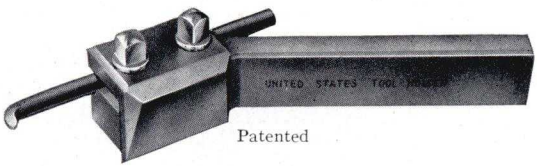
Bars Carry High Speed Cutter and Drop-Forged Wrench.

Price List.

No.	Size of Block	Size of Bar	Size of Cutter	Price Complete	Price Block Only
160	5/8 x 3 in.	1/2 x 10 in.	3/16 in.	$3.90	$1.25
161	3/4 x 3 1/2 in.	5/8 x 12 in.	1/4 in.	4.25	1.35
162	7/8 x 4 in.	3/4 x 13 in.	1/4 in.	6.25	1.50
163	1 x 4 1/2 in.	7/8 x 14 in.	5/16 in.	7.00	1.60
164	1 1/8 x 5 in.	1 x 15 in.	3/8 in.	8.25	1.75
165	1 1/4 x 5 1/2 in.	1 1/8 x 16 in.	3/8 in.	9.75	1.85
166	1 1/2 x 6 in.	1 1/4 x 18 in.	7/16 in.	10.90	2.00
167	1 3/4 x 6 1/2 in.	1 1/2 x 20 in.	1/2 in.	12.50	2.20
168	2 x 7 in.	1 3/4 x 24 in.	5/8 in.	18.00	2.50

NOTE.—1 1/4" up are made of tubing, cutter being held by a rod.

Champion Boring Tool



Patented

For inside threading and boring this tool is indispensable.

The angle of the groove in the offset head is such that cutters of any length can be used without interfering with the tool post.

A wider range of sizes of stock can be used in this tool than in any other on the market.

Cutters, drills, reamers, taps and many other tools can be used in this holder, and are not mashed down by a set-screw, but are firmly held by the clamp.

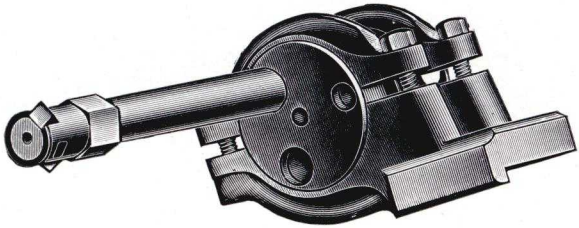
Cutters can be used down to short lengths.

The shank is made of steel, drop-forged, case-hardened after finishing, and is very rigid.

Prices, Including High Speed Cutter and Wrench.

No.	Size of Holder	Cutters	Price	Extra Cutters
510	½ x 1 x 6 in.	¼ to ½ in.	$3.90	Ask for prices
511	⅝ x 1¼ x 7 in.	⅜ to ⅝ in.	4.80	

Champion Boring Tool Attachment



Patented

Tool cannot slip or spring away from the work.
Perfectly rigid.
Fits any lathe.
Quickly adjusted.
Strong and durable.

When the cutter needs grinding it can be quickly removed from the bar and replaced without disturbing set of bar.

Defects of other fixtures entirely overcome.

Soon pays for itself in saving of time.

Our boring bar device is such that the cutters can be set to different angles in a moment's time without changing the bar.

Tool fits over tool post and is held by bar clamp, which fits in the tool post slot.

Our attachment holds three different sizes of boring bars. One size bar is included in price list; unless otherwise ordered the largest bar for attachment will be sent.

Price List.

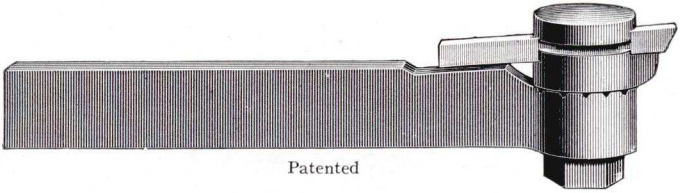
Largest Sized Bar is included in Price of Attachment.

No.	Size of bars which can be used in attachment	Size of Cutters	Price
146	5/8 inch x 18 inches	1/4 in.	$12.50
	7/8 inch x 18 inches	5/16 in.	
	1 1/8 inch x 18 inches	3/8 in.	
147	1 1/8 inch x 24 inches	3/8 in.	17.50
	1 1/4 inch x 24 inches	7/16 in.	
	1 1/2 inch x 24 inches	1/2 in.	

Extra Boring Bars.	Each
5/8 inch x 18 inches	$3.25
7/8 inch x 18 inches	4.00
1 1/8 inch x 18 and 24 inches	6.00
1 1/4 inch x 24 inches	7.00
1 1/2 inch x 24 inches	7.50

NOTE.—1 1/4" up is made of tubing; other sizes are solid.

Champion Planer Tool



Patented

An Efficient Tool. Drop-Forged of Steel.
Needed by Everyone Using a Planer or Shaper.
Cutters are High Speed Steel.

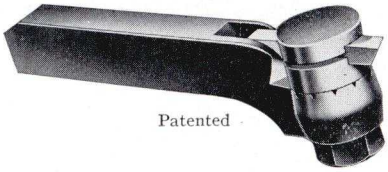
Cutter can be shifted to 6 (six) angles, right or left hand, by simply loosening nut. When nut is again tightened cutter cannot shift from its position.

Price List, Including High Speed Cutter and Wrench. Studs and Rings one-half Price of Tool.

No.	Size of Shank	Size of Cutter	Price	Extra Cutters
100	½ x 1 x 8 in.	$\frac{5}{16}$ in. square	**$4.65**	
101	⅝ x 1¼ x 9 in.	⅜ in. square	**6.00**	"ALTA" High Speed Steel.
102	¾ x 1⅜ x 10 in.	$\frac{7}{16}$ in. square	**7.50**	
103	⅞ x 1½ x 11 in.	½ in. square	**8.75**	
104	1 x 1⅝ x 12 in.	⅝ in. square	**11.00**	Ask for prices.
105	1½ x 2 x 15 in.	¾ in. square	**21.75**	
106	2 x 2¼ x 20 in.	⅞ in. square	**39.00**	It is the best.
107	2¼ x 2¾ x 24 in.	1¼ in. square	**57.00**	
108	3 x 3 x 30 in.	1½ in. square	**70.00**	

We carry a full line of High Speed Steels. Let us quote you.

Champion Drop-Head Planer Tool



This drop-head Planer Tool throws the cutting point in a line with the top of holder, thus preventing chattering and hogging of cutter.

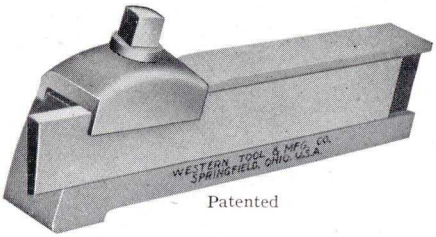
The shank is a steel drop-forging, thoroughly case-hardened, having a depressed head. This tool has six distinct positions, and is easily adjusted to them.

Price List, Including High Speed Cutter and Wrench.

No.	Size of Shank	Size of Cutter	Price	Extra Cutters
201	5/8 x 1 1/4 x 9 in.	3/8 in. square	**$6.25**	Ask for prices.

We carry a full line of High Speed Steels.

Champion Straight Cutting-Off Tool



Patented

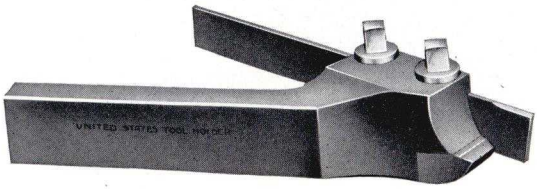
The tool has plenty of material in the stock where the bearing-down strain comes. The clamp is V- or wedge-shaped and is arranged to shift backward or forward, which allows of different sized cutters and also holds cutter in a positive position. It cuts right up to the shoulder. Solid top.

Price List, Complete With High Speed Cutter and Drop-Forged Wrench.

No.	Size of Holder	Size of Cutter	Price Complete	Extra Cutters
60	3/8 x 3/4 x 5	3/32 x 1/2 x 5	**$2.85**	
61	1/2 x 1 x 6	1/8 x 5/8 x 6	**3.00**	
62	5/8 x 1 1/4 x 7	1/8 x 7/8 x 7	**4.50**	Write
63	3/4 x 1 3/8 x 8	3/16 x 1 x 8	**6.00**	for
64	7/8 x 1 1/2 x 9	3/16 x 1 1/8 x 9	**7.50**	prices.
65	1 x 1 7/8 x 10	1/4 x 1 1/4 x 10	**9.75**	
66	1 1/4 x 2 x 11	1/4 x 1 3/8 x 11 1/2	**11.65**	

Champion Cutting-Off Tool

Patented



The cutter is flush with the side of the tool, thus allowing a cut to be made right against a shoulder.

The recessed channel permits the use of long cutter without interfering with tool post.

Grinding is necessary on the cutting end only. This is in itself a great time-saver.

In ordering, specify whether straight or offset holders are required; otherwise offset will be furnished.

This tool is designed for the rapid and economical cutting-off of metals.

The shank is of steel, drop-forged, case-hardened and designed for hard work.

A separable tempered tool steel base is used to support and clamp the cutter.

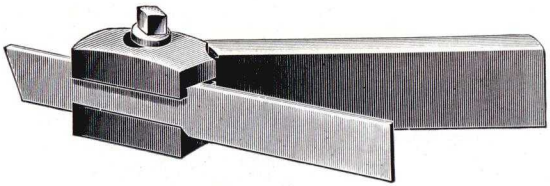
Beveled high speed steel is used for the cutters. The top is wider than the bottom, to give sufficient clearance for good work at a minimum waste of stock.

Prices, Including High Speed Cutter and Wrench.

No.	Size	Cutter	Price	Extra Cutters
515	½ x 1 x 6 in.	⅛ x ⅝ x 6 in.	$3.50	Ask for prices.
516	⅝ x 1¼ x 8 in.	⅛ x ⅞ x 7½ in.	4.50	

We carry a full line of High Speed Steels, square and beveled stock.

Champion Offset Cutting-Off Tool



Patented

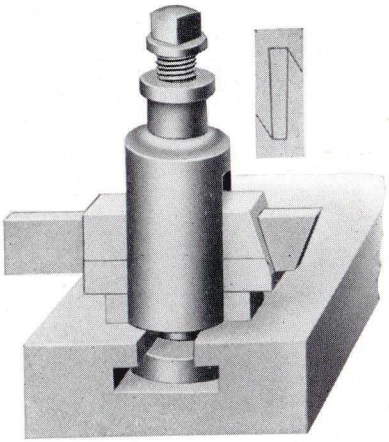
Right hand tool-cutter faces head stock. Left hand tool-cutter faces tail stock. The head of the tool contains plenty of material which gives all the strength required. The cutter is held firmly in position by a V-shaped over-lapping clamp. Cutters are High Speed Steel and beveled to give proper clearance.

Price List, Complete With High Speed Cutter and Drop-Forged Wrench.

No. R. H.	No. L. H.	Size of Holder	Size of Cutter	Price Complete	Extra Cutters
70	70	3/8 x 3/4 x 5	3/32 x 1/2 x 5	$2.85	
71	71	1/2 x 1 x 6	1/8 x 5/8 x 6	3.00	
72	72	5/8 x 1 1/4 x 7	1/8 x 7/8 x 7	4.50	Write
73	73	3/4 x 1 3/8 x 8	3/16 x 1 x 8	6.00	for
74	74	7/8 x 1 1/2 x 9	3/16 x 1 1/8 x 9	7.50	prices
75	75	1 x 1 7/8 x 10	1/4 x 1 1/4 x 10	9.75	
76	76	1 1/4 x 2 x 11	1/4 x 1 3/8 x 11	11.65	

Champion Cutting-Off Tool

For Screw Machines.

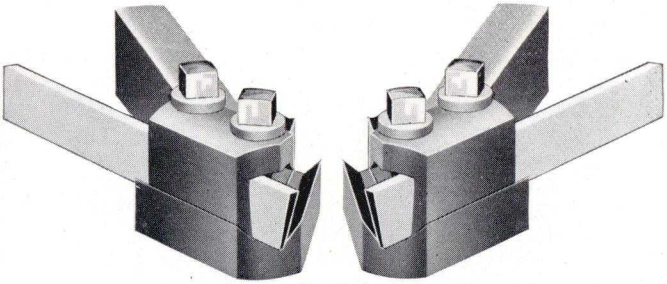


Patented

This tool is primarily intended for work on screw machines. The cutter being wedged, is jammed into the holder from above, below and both sides. Different sized cutters are firmly held. Cutters are high speed steel and double beveled. We guarantee this tool.

No.	Size of Holder	Size of Cutter	Price	Extra Cutters
300	3/8 x 7/8 x 2 1/2	3/32 x 1/2 x 5	$3.00	
301	1/2 x 1 1/8 x 3	1/8 x 5/8 x 6	3.65	Ask for prices.
302	5/8 x 1 1/4 x 3 1/2	3/16 x 3/4 x 7	4.00	
303	3/4 x 1 1/2 x 4	3/16 x 7/8 x 8	4.25	

Champion Two-Way Offset Cutting-Off Tool



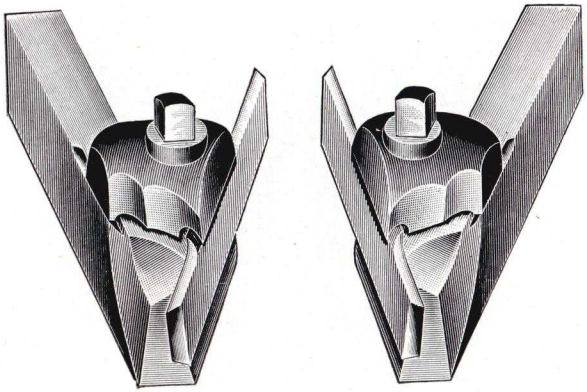
Patented

The Latest Cutting-Off Tool.
Drop-Forged of Steel.

Two tools in one—a right and left hand tool for about the price of one. The most powerful cutting-off tool on the market; requires but one cutter for right and left hand, without grinding both ends. Cutter is high speed steel.

No.	Size of Holder	Size of Cutter	Price	Extra Cutters
310	3/8 x 3/4 x 4	3/32 x 1/2 x 5	$4.65	Of High Speed Steel.
311	1/2 x 1 x 5	1/8 x 5/8 x 6	5.25	
312	5/8 x 1 1/4 x 6	3/16 x 7/8 x 7	6.00	Ask for prices.
313	3/4 x 1 1/2 x 7	3/16 x 1 x 8	7.25	

Champion Side Tool Holder

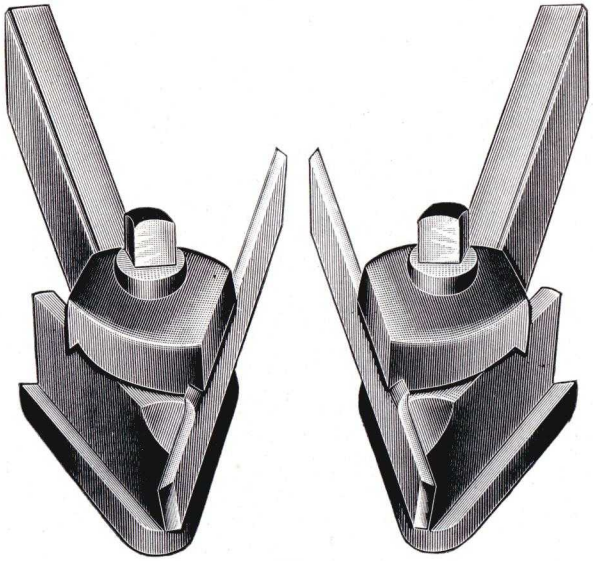


Right Hand — Patented — Left Hand

Price List, Complete with High Speed Cutter and Drop-Forged Wrench.

No. Right Hand	No. Left Hand	Size of Holder	Size of Cutter	Price	Extra Cutters
80	90	½ x 1 x 6	3/16 x ¾ x 5 in.	$4.00	High Speed Steel prices change. Let us quote you.
81	91	⅝ x 1¼ x 7	¼ x 1 x 6 in.	5.75	
82	92	¾ x 1½ x 8	5/16 x 1⅛ x 7 in.	7.50	
83	93	⅞ x 1⅝ x 9	5/16 x 1¼ x 8 in.	9.25	
84	94	1 x 1¾ x 10	5/16 x 1¼ x 9 in.	12.25	

Champion Two-Way Side Tool



Right Patented Left

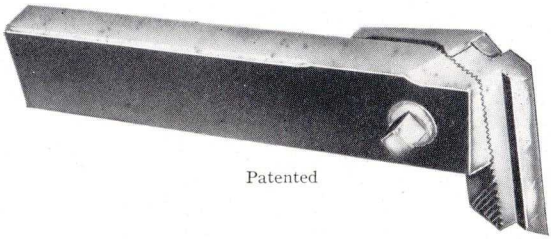
Right and Left in One.

For Facing and Roughing. Drop-Forged of Steel.

Two tools in one—a right and left hand tool for about the price of one. The most powerful side tool on the market. Includes high speed cutter and wrench.

No.	Size of Holder	Size of Cutter	Price	Extra Cutters
211	½ x 1 x 5	3/16 x ¾ x 5	$5.25	Ask for prices.
212	5/8 x 1¼ x 6	¼ x 1 x 6	6.00	
213	¾ x 1½ x 7	5/16 x 1⅛ x 7	7.25	

Champion U. S. Threading Tool



Patented

The shanks are made from a special grade of steel, nicely finished and case-hardened.

The cutters are made of high speed steel, milled to size, and accurately ground to gauge.

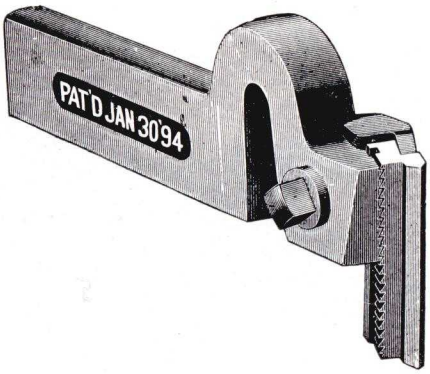
The only grinding necessary is across the top. This is an important feature, as the average mechanic will consume considerable time grinding a forged tool to gauge after the blacksmith has spent his time dressing the point.

Sufficient clearance is provided in both cutter and shank for good work.

Prices, Including High Speed Cutter and Wrench.

No.	Size	Price	Cutter
521	½ x 1 x 6 in.	$4.75	$1.25 net
522	⅝ x 1¼ x 7 in.	5.50	2.25 net
523	¾ x 1½ x 8 in.	7.50	3.50 net

Champion Spring Threading Tool



Made Straight and Offset.

The holders are made of good quality spring steel, drop-forged and finished true, giving the same clearance for each cutter.

The shape of the holder gives just enough spring to prevent chattering and digging in while cutting the thread.

The cutters are made of high speed steel.

The same cutter is used in cutting right or left hand threads.

Offset tool will cut close to shoulder.

The only grinding necessary is across the top. This is important.

Special.—Where a U. S. Standard cutter is ordered please be sure to specify the pitch.

NOTE.—Holders are furnished with one sharp V or U. S. Standard cutter. All holders will be shipped with sharp V cutter unless otherwise ordered.

Price List of Threading Tools, With High Speed Cutter and Wrench.

No.	Size Holder	Size Cutter	Price	Extra V Cutter	U. S. S.
110	½ x 1 x 6 straight	7 pitch or finer	**$4.50**	$1.25	$1.25
111	½ x 1 x 6 offset	7 pitch or finer	**4.50**	1.25	1.25
112	⅝ x 1⅜ x 7 offset	4 pitch or finer	**6.40**	2.25	2.25
113	⅝ x 1⅜ x 7 straight	4 pitch or finer	**6.40**	2.25	2.25
A 114	¾ x 1½ x 7 offset	4 pitch or finer	**8.00**	2.25	2.25
B 114	¾ x 1½ x 7 straight	4 pitch or finer	**8.00**	2.25	2.25

The only grinding necessary is across the top. This is important.

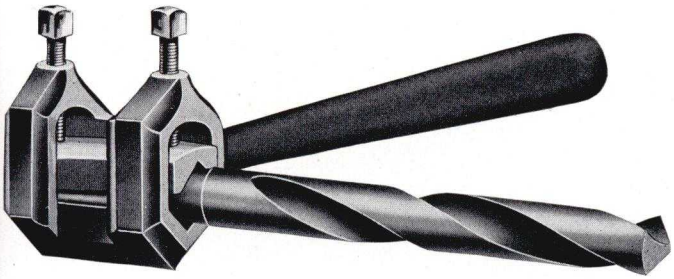
Champion Sugar-Roll Grooving Tool

This tool holder is not an experiment; it has been in use in Cuba for a number of years. Its worth and usefulness have been demonstrated.

It is rigid, tough and durable. Cutters are made of the best high speed steel and in various pitches.

No.	Size	Weight	Cutters	Price Complete
G 1	1 x 1¾	12 lbs.	$2.00	$10.00
G 2	1½ x 2¼	18 lbs.	2.50	12.00

Champion Drill Holder



This drill holder is designed to hold taper and straight shank drills.

No. 172 will hold No. 1 and No. 2 taper shank and ¼″ to ¾″ straight shank drills.
Price complete.....$1.50

No. 173 will hold No. 1, No. 2 and No. 3 taper shank and ¾″ to 1¼″ straight shank drills.
Price complete.....$2.00

No. 174 will hold No. 2, No. 3 and No. 4 taper shank and ¾″ to 1¾″ straight shank drills.
Price complete.....$3.00

Champion "Alta" High Speed Steels For Tool Holders

For tool holders steel should be ordered in tool holder lengths.

Our tool holder bits are properly hardened and ready for immediate use.

Generally the purchaser has not the facilities for properly hardening and treating high speed steels. We maintain our own hardening department, where this work is expertly done. We guarantee it.

We are also prepared to furnish all tool holder shapes—round, square, bevel and double bevel—in 36-inch lengths.

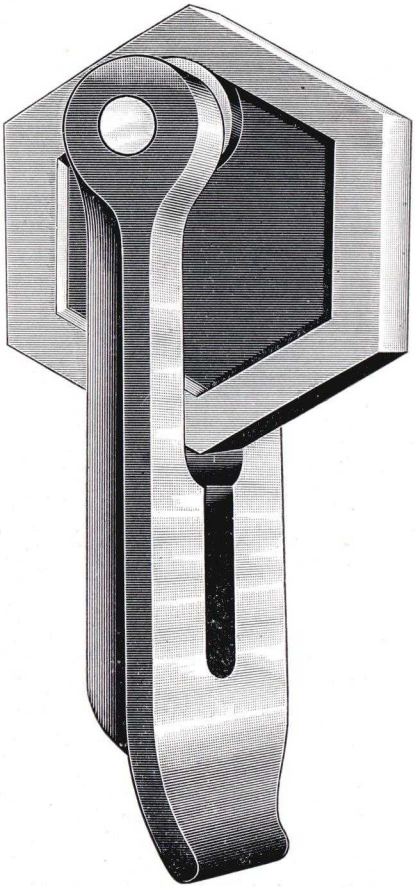
We strive to give our customers the best quality at the lowest possible price.

These 36″ lengths will be sent annealed. 1″ to 12″ unannealed.

Size of High Speed Tool Holder Bits.

Size	Bevel and Double Bevel
3/16″ Square x 1 1/2″	3/32″ x 1/2″ x 5″
1/4″ Square x 1 3/4″	1/8″ x 5/8″ x 6″
5/16″ Square x 2 1/4″	1/8″ x 3/4″ x 6″
3/8″ Square x 3″	1/8″ x 7/8″ x 7″
7/16″ Square x 3 1/4″	1/8″ x 1″ x 7″
1/2″ Square x 3 1/2″	3/16″ x 3/4″ x 5″
5/8″ Square x 4 1/2″	3/16″ x 7/8″ x 8″
3/4″ Square x 5″	3/16″ x 1″ x 8″
7/8″ Square x 5 1/2″	3/16″ x 1 1/8″ x 9″
1″ Square x 5 3/4″	1/4″ x 1″ x 6″
	1/4″ x 1 1/4″ x 10″
3/8″ Round x 4″	1/4″ x 1 3/8″ x 11″
1/2″ Round x 5″	5/16″ x 1 1/8″ x 7″
5/8″ Round x 6″	5/16″ x 1 1/4″ x 8″
3/4″ Round x 7″	5/16″ x 1 1/4″ x 9″

Champion Drill or Planer Clamp



This is a most serviceable tool; saves time hunting for blocks and scraps of iron. The base being hexagonal in shape, six different heights for each size is obtainable. Made of malleable iron.

Length and Weight.			Price.	
Height	Length	Weight		
½ to 2 in.	8 in.	4 lbs.	½ to 2 in.	$1.00
1 to 3 in.	10 in.	7 lbs.	1 to 3 in.	1.50
1 to 4 in.	15 in.	15 lbs.	1 to 4 in.	2.25

Champion Drop-Forged "C" Clamps

These are drop-forged from a strong, tough grade of carefully selected steel, and their form is such as to utilize the metal to the greatest advantage.

They are submitted to a special process after forging which increases their rigidity and strength and reduces the liability of springing.

The screws, threaded U. S. Standard, are made of a special grade of steel well adapted to the purpose and are hardened and tempered.

For Convenience of Dealers, each Clamp is packed in a box.

Number.	Capacity Inches.	Depth of Throat from Center of Screw—In.	Extreme Dimensions of Body.		Screw		Approximate Weight Lbs. Each.	Price	
			Length	Width	Diameter Inches.	Length Inches.		Extra Screws Each	Clamp Complete.
0	¾	1	2 3/16	1 5/16	⅜	1¼	¼	$0.10	$0.50
1	1¼	1⅜	3¼	2¾	5/16	1¾	⅝	.12	.75
1½	1¾	1¾	4¼	3 5/8	9/16	2¼	1⅞	.16	1.25
2	2¼	2	5½	4½	11/16	2⅞	3¾	.24	1.75
3	3½	2¾	7¼	5¾	13/16	3¾	6	.40	2.50
4	4½	3	8⅞	6½	15/16	4½	10¼	.60	3.25
5	5½	3½	10⅜	7	1	5⅜	12¼	.75	4.00
6	6½	3¾	12	7⅞	1⅛	5⅞	17	1.00	5.00
8	8½	4	14⅜	8½	1¼	7	23¼	1.50	7.00
10½	10½	4½	16⅞	9 1/16	1¼	7½	28	1.75	9.50
12½	12½	5	19⅜	9¾	1¼	8	40	2.00	12.50

Champion Universal "C" Clamp

This clamp can be used for the same purposes as the ordinary light purpose "C" Clamp.

The ends and sides are machined at right angles. When used in pairs they make a desirable drilling fixture, as holes can be drilled at right angles without loosening the clamps. Can also be used to great advantage in drilling long pieces. A vise clamp holds for a short distance only, while these clamps permit of adjustment to lengths.

This clamp is extra good for patternmakers.

No.	Capacity Inches	Depth of Throat from Center of Screw	Price Each Complete
D 14	1½	1	$1.50
D 15	2	1½	2.35
D 16	3	1¾	2.65
D 17	4	2½	3.00
D 18	6	2⅝	3.65
D 19	8	2¾	4.35
D 20	10	3¾	5.00
D 21	12	4	5.65
D 22	15	5	7.35
D 23	18	5½	9.35

Champion Safety Lathe Dogs

A Balanced Lathe Dog.
A Safety Lathe Dog.

Set-screw works in counter-sunk hole in the head and is set with a socket wrench. Wrench fits the set-screw snugly and there is very little clearance between the wall of the counter-sunk hole and the side of the socket wrench.

The corners will not wear round. Both dog and wrench are drop-forgings and are guaranteed against any defect in material or workmanship.

Number		Capacity Inches	Weight Dog	Weight Wrench	Price Dog With Wrench	Price Dog Without Wrench	Price Wrench	Price Extra Screws
Bent Tail	Straight Tail							
1	21	3/8	1/2 lb.	3/16 lb.	$0.65	$0.50	$0.15	$0.06
2	22	1/2	5/8 lb.	1/4 lb.	.72	.55	.17	.07
3	23	3/4	1 1/8 lb.	5/8 lb.	.78	.60	.18	.09
4	24	1	1 1/2 lb.	3/4 lb.	.90	.70	.20	.11
5	25	1 1/4	2 1/2 lb.	3/4 lb.	1.05	.85	.20	.11
6	26	1 1/2	2 5/8 lb.	7/8 lb.	1.22	1.00	.22	.14
7	27	1 3/4	3 1/16 lb.	7/8 lb.	1.42	1.20	.22	.14
8	28	2	3 9/16 lb.	1 lb.	1.66	1.40	.26	.17
9	29	2 1/2	5 5/16 lb.	1 lb.	2.06	1.80	.26	.17
10	30	3	7 lb.	1 1/8 lb.	2.58	2.30	.28	.24
11	31	3 1/2	9 lb.	1 1/8 lb.	3.28	3.00	.28	.24
12	32	4	11 lb.	1 9/16 lb.	4.91	4.50	.41	.31
13	33	4 1/2	13 lb.	1 9/16 lb.	6.41	6.00	.41	.31
14	34	5	17 1/2 lb.	1 3/4 lb.	8.54	8.00	.54	.62

Square Head Set-Screw.

Champion Heavy-Duty Lathe Dogs

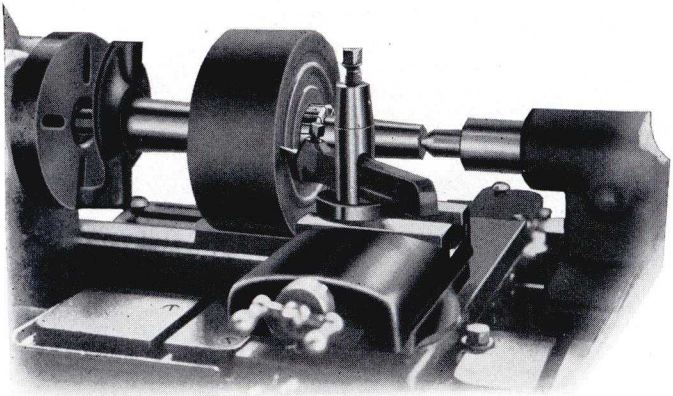
Safety Dog.
Safety Square Set-Screw.
Double Screws.

Designed to Meet Extraordinary Demands.

Number		Capacity Inches.	Weight Dog.	Weight Wrench.	Price Dog With Wrench.	Price Dog Without Wrench.	Price of Wrench.	Price Extra Screws.
Bent Tail.	Straight Tail.							
8A	8B	2	4½ lbs.	1 lb.	$3.00	$2.75	$0.26	$0.17
9A	9B	2½	5¾ lbs.	1 lb.	3.76	3.50	.26	.17
10A	10B	3	6½ lbs.	1⅛ lb.	4.78	4.50	.28	.24
11A	11B	3½	11 lbs. 10 oz.	1⅛ lb.	6.28	6.00	.28	.24
12A	12B	4	13 lbs. 12 oz.	1⅜ lb.	8.41	8.00	.41	.31
13A	13B	4½	15 lbs.	1⅜ lb.	10.41	10.00	.41	.31
14A	14B	5	19 lbs.	1¾ lb.	12.54	12.00	.54	.62
15A	15B	5½	22 lbs.	1¾ lb.	15.04	14.50	.54	.62
16A	16B	6	23 lbs.	1¾ lb.	17.54	17.00	.54	.62

Standard Socket Wrench Is Used.

Champion Expanding Mandrel



First—Its simplicity. Consisting of only two parts—a taper arbor and a flexible round sleeve. Each part of best grade of steel, thoroughly hardened, they are practically unwearable.

Second—Having no jaws it cannot distort or injure work.

Third—The close approximation of its exterior surface to the cylindrical form enables thin tubes or bushings to be turned upon it without distortion.

Fourth—It always allows of overhanging when surfacing, thus obviating the liability of cutting into mandrel.

Fifth—It will hold work of any length of bore and will not chatter.

Sixth—It is lighter, more easily handled, and keeps truer than a common mandrel.

Seventh—It is suitable for all classes of work, large and small, all kinds of metal (even the softest), and is therefore indispensable to every up-to-date workshop.

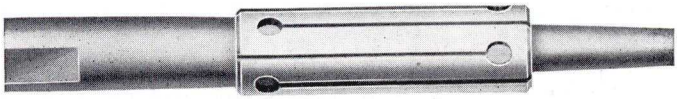
Eighth—There is no difficulty in releasing work.

Ninth—The greatest accuracy is assured by all parts being ground after hardening.

The cost is about one-fifth of solid arbors of equal range graduated by sixteenths. For comparison our No. 10 mandrel, capacity 2¾ inches to 3¾ inches, with two sleeves, costs $37.50, whereas a set of solid arbors of equal capacity will cost $205.00.

Champion Expanding Mandrel

A Necessity to Every Machinist.



Patented

This Mandrel is the last word in efficiency.

Have you ever spent an hour looking for "that arbor", and did you find it?

Have you ever lost a day while "that arbor" was being machined, hardened and ground?

Have you ever found "that arbor" to be just a few thousandths over or under the required size?

Have you ever figured the COST of the lost time in connection with "that arbor"?

One set of Champion Expanding Mandrels, twelve of them, will fill by thousandths any inside diameter from ½ inch to 6½ inches.

Let us have your inquiry.

Our No. 10 Takes the place of sixteen
Solid Mandrels graduated by sixteenths.

Champion Expanding Mandrel

Sizes and Prices.

No.	Range	Length of Arbor	Length of Sleeve	Price
1	½ in. up to 9/16 in.	5	2½	$5.00
2	9/32 in. up to 21/32 in.	6	2¾	5.50
3	21/32 in. up to ¾ in.	6	2¾	6.00
4	¾ in. up to ⅞ in.	7	3¼	6.50
5	⅞ in. up to 1 in.	7	3¼	7.50
6	1 in. up to 1⅜ in.	9	4	13.50
7	1¼ in. up to 1⅝ in.	9	4	15.50
8	1½ in. up to 2 in.	11½	5	17.50
9	2 in. up to 2¾ in.	14	5½	26.50
10	2¾ in. up to 3¾ in.	17	6	37.50
11	3¾ in. up to 5 in.	20	7	60.00
12	5 in. up to 6½ in.	24	8	75.00

NOTE.—All sizes from No. 1 to No. 5 inclusive have one flexible sleeve only. Price of sleeves two-thirds of price shown above.

All sizes from No. 6 upwards have two flexible sleeves to obtain maximum expansion. Price of two sleeves, three-quarters of prices shown above.

Special Price for Complete Set, $265.00.

Champion Emery Wheel Dresser

We are Emery Wheel Dresser Specialists.

Cutters.—It was only after a lengthy period of experimental work that we found the proper grade of steel to use in the manufacture of the cutter wheels. This steel is now made up specially for us and according to our specifications. After the wheels are formed they are heat-treated and tempered by a special process. In a word, we are producing a cutter of the highest possible degree of merit, and as such guarantee them.

Sleeve.—A sleeve is furnished with each set of cutters. It revolves on the spindle and the cutters in turn revolve on it, thereby providing a more perfect bearing for the cutter wheels, preventing the grooving of the spindle and entirely eliminating the wobbling. Made of steel and hardened.

Spindle.—The spindle, or axle, is of the best quality polished drill-rod.

Spindle Bearing.—The spindle-bearing is patented and its merit obvious. Made of steel, thoroughly hardened, serving at once as a bearing for the spindle and as a guide for the cutter wheels; makes impossible the wobbling so prevalent in the cheaper makes of dressers. The spindle-bearing cannot turn in the handle.

Handle.—The handle is patented, heavy and strongly made; designed for long service, efficiency and economy. We guarantee it.

Handle Cap.—The handle cap is patented and three-fold in design; providing at once a safety feature, eliminating the old-fashioned set-screws and functioning as upper-clamp for the spindle-bearing. Further, there are no moving parts. The spindle does not turn in handle. It follows that in the absence of any wear the life of the handle and handle-cap is indefinite.

We have evolved an emery wheel dresser that is correct mechanically and will out-wear a dozen of the cheaper types of dressers. The only dresser that runs in an oil bearing.

Let us have your order and do your emery wheel dressing economically and efficiently.

Champion Emery Wheel Dresser

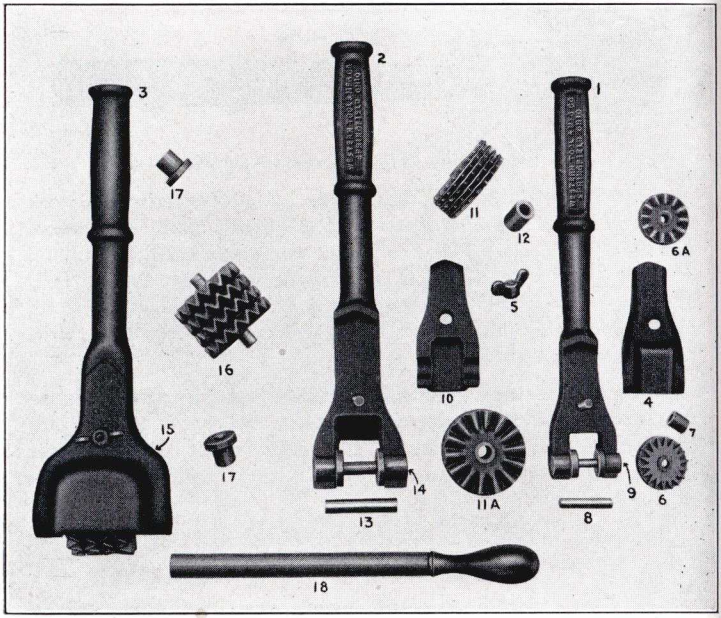
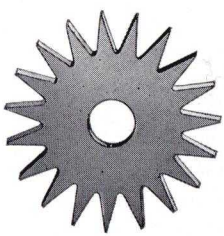


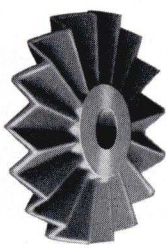
Figure 1 No. 1 handle with handle-cap stud and its two spindle-bearings with spindle.
Figure 2 No. 2 handle with handle-cap stud and its two spindle-bearings with spindle.
Figure 3 No. 3 dresser complete with corrugated hard-iron cutters.
Figure 4 No. 1 handle-cap.
Figure 5 Wing-nut for holding handle-cap and cutter assembly in position.
Figure 6 No. 1 star cutters.
6A No. 1 corrugated cutters.
Figure 7 No. 1 sleeve.
Figure 8 No. 1 spindle.
Figure 9 No. 1 spindle and spindle-bearing in position.
Figure 10 No. 2 handle-cap.
Figure 11 No. 2 star cutters.
11A No. 2 corrugated cutters.
Figure 12 No. 2 sleeve.
Figure 13 No. 2 spindle.
Figure 14 No. 2 spindle and spindle-bearing in position.
Figure 15 No. 3 handle-cap in position.
Figure 16 No. 3 corrugated hard-iron cutter assembly.
Figure 17 No. 3 spindle-bearing.
Figure 18 Our latest addition to the Champion emery wheel dresser line, namely, the Champion Abrasive Dresser.

Champion Emery Wheel Dresser



Star Cutter

Corrugated Cutter



Hard-iron Cutter

Prices and Parts.

No. 1	Champion Emery Wheel Dresser Complete	$1.00
	One set of Star Cutters includes four cutters, three washers 1½-inch in diameter and sleeve	.25 per set
	One set of Corrugated Cutters includes four cutters, two washers 1½-inch in diameter and sleeve	.25 per set
	Spindle ¼ x 1⅝ inches—one	.03 each
	Spindle Bearings—two	.20 per set
No. 1H	Hyde Emery Wheel Dresser Complete	1.25
	One set of Star Cutters includes four cutters, two washers 1⅝-inch in diameter and sleeve	.25 per set
	Spindle ¼ x 1⅝ inch—one	.03 each
	Spindle Bearings—two	.20 per set
No. 2	Champion Emery Wheel Dresser Complete	1.75
	One set of Star Cutters includes five cutters, four washers 2⅜-inch in diameter and sleeve	.50 per set
	One set of Corrugated Cutters includes five cutters, four washers 2⅜-inch in diameter and sleeve	.50 per set
	Spindle ⅜ x 2⅛-inch—one	.05 each
	Spindle Bearings—two	.25 per set
No. 2	Champion Emery Wheel Dresser Complete	1.75
	Five sets of unannealed malleable iron (hard-iron) cutters, two in set	.50 five sets
	Spindle ⅜ x 2⅛-inch—one	.05 each
	Spindle Bearings—two	.25 per set
No. 3	Champion Emery Wheel Dresser Complete	2.00
	One set of corrugated unannealed malleable iron (hard-iron) cutters, four in set	.25 per set
	Spindle ⅜ x 3¼-inch —one	.10 each
	Spindle Bearings—two	.25 per set

NOTE.—Spindles and spindle-bearings in No. 1 and No. 1H Hyde are interchangeable, and spindle-bearings in No. 2 Champion and No. 3 Champion are also interchangeable.

Champion Abrasive Emery Wheel Dresser

The tube is of the same diameter the full length, thus assuring the consumer the greatest amount of cutting material.

The tube is entirely filled with the hardest vitrified abrasive known; practically as hard as a black diamond, and a most satisfactory and more economical substitute for the trueing, shaping and dressing of emery wheels.

Our Champion Abrasive Dresser is the most satisfactory for all-around service. In the dressing of precision wheels, if the roughing is done with our dresser prior to the finishing cut taken with a diamond, the life of the latter is greatly prolonged.

The use of our Abrasive Dresser reduces to a minimum the consumption of the extremely expensive diamonds.

The Champion Dresser is one of merit and guaranteed to give full satisfaction.

Let us have your trial order.

Size and Price.

Diameter	Length	Price
5/8 in.	10 in.	$3.50
5/8 in.	12 in.	4.00
3/4 in.	10 in.	4.50
3/4 in.	12 in.	5.00

LISTED on the pages that follow will be found the largest and most complete line of shop furniture manufactured in the United States.

Many of these articles have patented features, and all of them are designed to fill some needed requirement.

The correct application of the shop furniture principle is one of the longest strides possible to take in the direction of efficiency and economy.

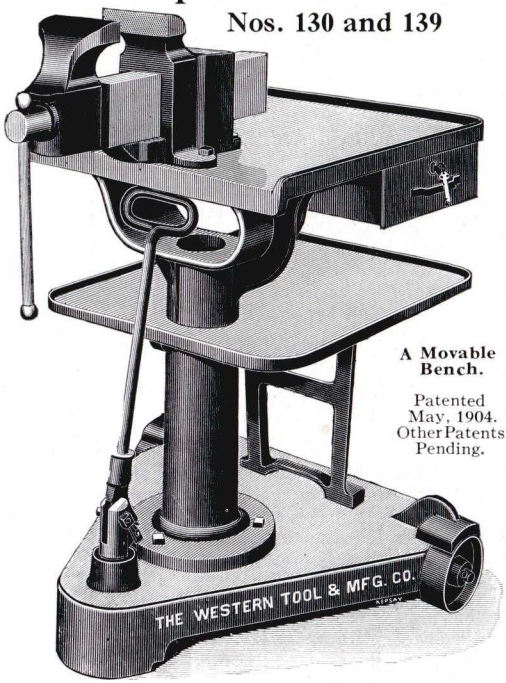
More importance is being attached to shop furnishing than ever before; and as labor-saving devices our furniture is worthy of careful consideration.

Shop furniture of grey iron and sheet steel is being used by the best firms, the latter having for various reasons discarded oil-soaked wooden stands, boxes, etc., replacing them with all-metal stands superior in construction and function—cleanly, no maintenance cost, reduces fire insurance risk, and, if bought in quantities, the initial cost or replacement is less than that of wooden fixtures.

Should dimensions or designs as listed in our catalogue fail to meet your requirements, we ask that you send us specifications, accompanied by blue prints if possible, and allow us the privilege of quoting.

Champion Portable Vise Stand

Nos. 130 and 139



A Movable Bench.

Patented May, 1904. Other Patents Pending.

All of full bench facilities adjoining machine or work.

A great convenience in assembling rooms, loom factories, automobile repair shops, railroad shops and roundhouses.

The base is heavy in construction. When the brakes are set the stand is is held stationary, permitting filing, etc. Very substantial.

By pulling handle forward, front wheels are thrown into operation and brake released from rear wheels.

Specifications No. 130, 131, 132, 133 and 134 Stands.

Stand 44 inches high.
Base 26 inches on sides.
Table and shelf 17 x 21 inches.
Shelf 15 inches above base.
Wheels 1¾ x 5 inches.
Weight of stand, crated, without vise, 300 lbs.

Prices.

No. 130 Stand without vise	$36.00
No. 130 Stand equipped with No 13, 4 in. solid-jaw vise	45.00
No. 131 Stand equipped with No. 14, 4½ in. solid-jaw vise	47.00
No. 132 Stand equipped with No. 60, 4 in. combination pipe-jaw and swivel-base vise	50.00
No. 133 Stand equipped with No. 61, 4½ in. combination pipe-jaw and swivel-base vise	53.00
No. 134 Stand equipped with No. 54, 4 in. swivel-jaw and swivel-base vise	52.00

Specifications No. 135, 136, 137, 138 and 139 Stands.

Stand 44 inches high.
Base 29 inches on sides.
Table and shelf 21 x 25 inches.
Shelf 15 inches above base.
Wheels 1¾ x 5 inches.
Weight of stand, crated, without vise, 455 lbs.

Prices.

No. 135 Stand without vise	$51.00
No. 135 Stand equipped with No. 15, 5 in. solid-jaw vise	64.75
No. 136 Stand equipped with No. 17, 6 in. solid-jaw vise	78.50
No. 137 Stand equipped with No. 62, 5 in. combination pipe-jaw and swivel-base vise	72.50
No. 138 Stand equipped with No. 63, 6 in. combination pipe-jaw and swivel-base vise	76.50
No. 139 Stand equipped with No. 56, swivel-jaw and swivel-base vise	75.50

Above prices include Drawer with Lock.

Champion Stationary Stand

Nos. 167 and 167 A.

This stand, when placed adjoining lathes or other machines, makes bench facilities possible at a minimum cost and without loss of time. Has variety of uses. Small arbor-presses may be mounted thereon as well as other similar fixtures.

Specifications—167.

Height	36 in.
Weight	200 lbs.
Table	17x21 in.
Shelf	17x21 in.
No. 167 Complete Without Vise	$22.00
No. 167 Without Shelf or Drawer	16.25

Specifications—167A.

Height	33 in.
Weight	300 lbs.
Table	21x25 in.
Shelf	21x25 in.
No. 167A Complete Without Vise	$31.50
No. 167A Without Shelf or Drawer	25.00

For information on Vise equipment, see pages 87 to 91.

Champion Portable Stand

Nos. 150 and 150 S.

Take Tools, Vise and Bench to the Work,
Not the Work to the Bench.
Peculiarly adapted for Garage Work.

Made strong enough to carry any load; easily moved anywhere. Keeps tools and work together; the greatest kind of time-saver, and hence a daily economy in every shop. When handle is upright as shown the bench rests solidly and immovably on the floor; when the handle is pulled forward front wheel is thrown into operation and brake on rear wheels released.

Specifications.

Height	40 in.
Top shelf	22x30 in.
Other shelves	22x24 in.
Distance between shelves as ordered	7 in.
Wheels	1¾x5 in.
Weight, without vise	300 lbs.

Prices Without Vise.

No. 150	Tool Stand, all grey iron	**$39.50**
No. 150 S	Grey iron base, sheet steel shelves and top	**36.00**

For information on Vise equipment see pages 87 to 91.

Champion Portable Stand

Nos. 151 and 151S.

Grey iron or sheet steel; very durable.

Easily moved with a load.

This stand is a great labor-saver.

For information on Vise equipment for grey iron stand only, see pages 87 to 91.

Specifications.

Height	40 in.
Top shelf	22x30 in.
Other shelves	22x24 in.
Distance between shelves	7 in.
Wheels	1¾x5 in.

Prices Without Vise.

No. 151.	Two shelves, all grey iron	Weight 220 lbs.	$22.50
No. 151.	Three shelves, all grey iron	Weight 240 lbs.	26.00
No. 151S.	Two shelves, all sheet steel	Weight 120 lbs.	18.00
No. 151S.	Three shelves, all sheet steel	Weight 140 lbs.	20.25

Vise equipment for sheet steel stands not recommended.

Champion Stationary Stand

Nos. 152 and 152S.

Equipped with grey iron or sheet steel; very durable.

Holds work for the day.

Has drawer and lock.

Will soon pay for itself in time saved.

For information on Vise equipment for grey iron stands only, see pages 87 to 91.

Specifications.

Height	40 in.
Top shelf	22x30 in.
Other shelves	22x24 in.
Distance between shelves	7 in.

Prices Without Vise.

No. 152.	Two shelves, all grey iron	Weight 220 lbs.	$21.25
No. 152.	Three shelves, all grey iron	Weight 240 lbs.	24.50
No. 152S.	Two shelves, sheet steel	Weight 120 lbs.	17.00
No. 152S.	Three shelves, sheet steel	Weight 140 lbs.	19.25

Vise equipment for sheet steel stands not recommended.

Champion Portable Shop Stand

Nos. 155 and 155S.

Made of grey iron or sheet steel.

This stand is used in assembling-rooms, store-rooms or in the shop proper. Is especially designed for narrow places. Rigid and practically unwearable. Will turn in its own length.

Specifications and Prices.

Shelves, grey iron or sheet steel	14x48 in.
Center wheels	10x 2 in.
End wheels	6¾x1¾ in.
Height as ordered.	
Greatest width at extreme ends of axle	20 in.
Weight, grey iron stand	285 lbs.
Weight, sheet steel stand	120 lbs.
No. 155. Price, all grey iron	$27.75
No. 155S. Price, sheet steel (grey iron base)	21.25

Champion Stationary Stand

Nos. 158 and 158 S.

This stand is of grey iron or sheet steel, equipped with drawer and lock.

Has two racks for holding tongs, hammers, etc. Designed for blacksmith and machine shop use.

Specifications.

Height, 36 inches, or as ordered.

Top shelf, 22 x 24 inches.

Flange, 4 inches deep at back.

Lower shelf, 22 x 24 inches.

Weight, 160 lbs.

Price, No. 158	With drawer	$19.25
Price, No. 158	Without drawer	18.00
Price, No. 158 S	With drawer, sheet metal	16.00
Price, No. 158 S	Without drawer, sheet metal	15.00

Champion Grey Iron Stand

No. 153.

Shelves are flanged. All grey iron.

Supports are ¾-inch pipe.

Shelves held by set-screw; are adjustable.

Supersedes wooden benches.

If ordered in quantities cost will not exceed that of wooden stands, and are more durable and satisfactory.

Specifications.

Height	36 in.
Shelves	18x28 in.
Weight	185 lbs.

Price.

No. 153	Three shelves and drawer	$21.25

Champion Tapered All-Steel Stand
No. 156.

A stationary stand of great merit; very rigid. Uprights made of angle iron and shelves of 14-gauge steel. Throw away your wooden shop furniture. By purchasing our shop furniture in quantities, the cost does not exceed that of wooden stands and are far more durable.

Height	36 in.
Top shelf	18x30 in.
Middle shelf	20x30¼ in.
Lower shelf	22x31 in.
Weight, crated	110 lbs.

Price.

No. 156 Three shelves and drawer	$17.00

Champion Stationary Stand

Nos. 159 and 159 S.

This stand can be made any height desired, even to the ceiling. Shelves are of grey iron or sheet steel, as preferred. This makes a very strong and durable stand. Special sizes in sheet steel made to order. Ask for prices.

Specifications.

Height, as ordered.
Shelves, 14 x 48 inches.
Distance between shelves, optional.

Price.

Four shelves, grey iron	Weight 300 lbs.	$30.00
No. 159 S Four shelves, sheet steel	Weight 140 lbs.	22.50
Additional shelves, grey iron		5.50
Additional shelves, sheet steel		4.00

Champion Tool Box

No. 170.

Designed to Hold Small Tools, etc.
Made of Sheet Steel.

Dimensions.

Height	28 in.
Box	15 x 20 x 5 in. deep
Price	$7.50

Champion Superintendent's Stand
No. 163.

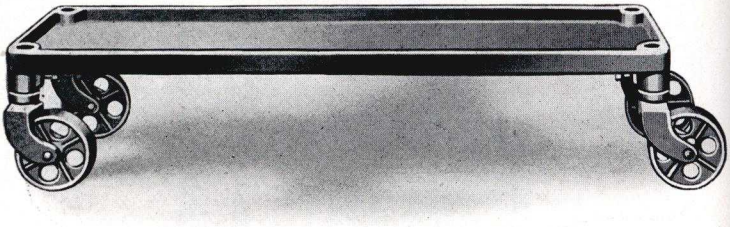
A movable shop or platform desk, made of grey iron and sheet steel, strongly constructed. This stand is designed particularly for clerical work performed outside the general offices. It is indispensable to platform clerks, shop superintendents, foremen, etc.

Specifications.

Height, rear	43 in.
Height, front	41 in.
Width, top	24x20 in.
Depth of desk	4 in.
Lid raises	
Wheels	5x1½ in.
Weight	160 lbs.
Price, complete with drawer and lock	$20.75

Champion Truck

No. 160.



Designed for moving boxes, castings, dies, etc, etc.

Is very rigid.

Maximum load, 1,000 lbs.

Made in grey iron only.

Holes are drilled in corners for the accommodation of uprights.

Base-bottom is flanged from end to end, giving additional strength.

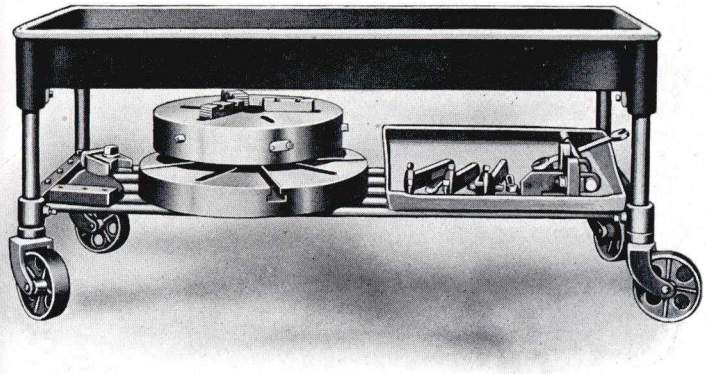
Will turn in its own length.

Specifications.

Base, 14 x 48 in.	Height, 7½ in. from floor.
Wheels, 1¾ x 5 in.	Weight, 100 lbs.

Price..... **$13.50**

Champion Lathe Pan, Double Type
No. 161S.



Made of sheet steel; strong and durable; easily moved with a load.

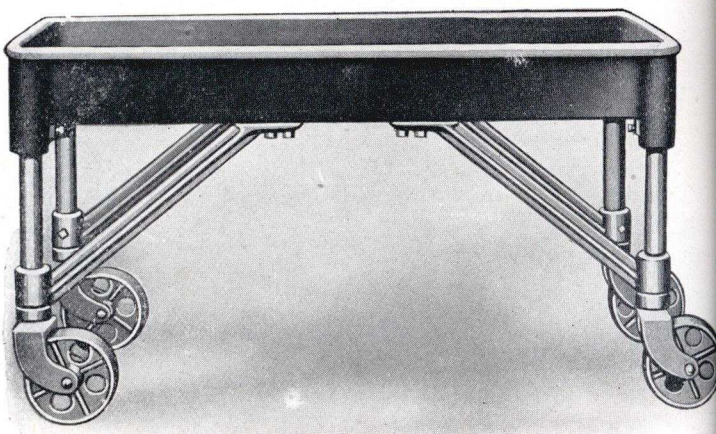
Specifications and Prices.

Length	Width	Depth	Price
36 in.	16 in.	4 in.	$17.00
48 in.	16 in.	4 in.	19.25
60 in.	16 in.	4 in.	20.75
36 in.	20 in.	4 in.	18.00
48 in.	20 in.	4 in.	19.75
60 in.	20 in.	4 in.	21.50

In ordering give distance between the bottom of the lathe and the floor.

Champion Lathe Pan, Single Type

No. 162S.



Made of sheet steel; strongly constructed; easily moved.

Replaces old-style wooden fixtures.

Specifications and Prices.

Length	Width	Depth	Price
36 in.	16 in.	4 in.	**$16.00**
48 in.	16 in.	4 in.	**17.00**
60 in.	16 in.	4 in.	**20.25**
36 in.	20 in.	4 in.	**16.25**
48 in.	20 in.	4 in.	**18.00**
60 in.	20 in.	4 in.	**22.50**

In ordering give distance between the bottom of the lathe and the floor.

Champion Compartment Truck

No. 164.

Particularly adapted for use in repair garages.

A labor-saving device in connection with the dismantling of cars.

A great convenience to oilers, millwrights and others carrying oils, greases, belt lacing, etc.

Stand is equipped with drawer and lock, a wheel-braking device and our Western Vise No. 13.

Specifications.

Height, 37 inches.
Height, middle tray, 32 inches.
Height, lower shelf, 8 inches.
Top, 14 x 42 inches, grey iron.
Middle tray, 26 x 42 inches, sheet steel.
Bottom tray, 26 x 42 inches.
Drawer tray, 13 x 14 x 4 inches deep.
Wheels, 5 x 1½ inches.

Weight, complete ..... 230 lbs.
Price **$73.00**

Champion Portable Stand with Side Bars

No. 166.

Designed for handling small castings.

Grey iron, strong and durable.

Intermediate bars adjustable.

Shelves, grey iron	14x48 in.
Center wheels	10x 2 in.
End wheels	6¾x1¾ in.
Height, as ordered.	
Greatest width and extreme length of axle	20 in.
Weight	345 lbs.
Price	$37.50

Champion Steel Truck

No. 173.

Designed for moving boxes, bar iron and steel, pipe, flat stock, etc, etc.

Large wheels, all metal, steel spokes, mounted on roller bearings.

End wheels swivel; will turn in its own length.

Two-ton capacity.

Specifications.

Top, 36 x 96 in.	Wheels, 18 x 2 in.
Height, 22 in.	Weight, 600 lbs.
Price	$75.00
Price, with sheet steel top	81.50

Champion Portable Shop Box
No. 177.

Made of 16-gauge sheet steel reinforced with angle iron. Mounted on all-metal wheels with full swivel.

Specifications.

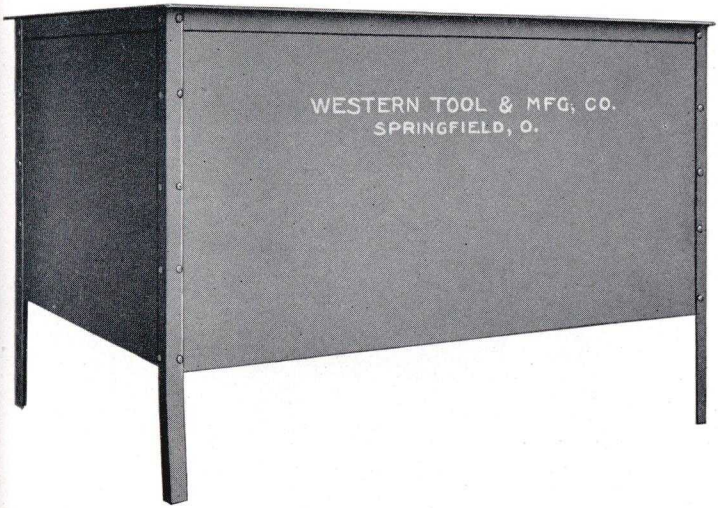
Length, 36 in. Wheels, 5 x 1½ in.

Width, 25 in. Weight, 125 lbs.

Depth, 18 in.

Price..... $21.25

Champion Stationary Shop Box
No. 176 A.



Designed to be used in connection with lift truck, or can be used as stationary box. Made of 16-gauge sheet steel reinforced with 1½-inch angle iron.

Specifications.

Length, 36 in. Legs, 7 in.

Width, 25 in. Weight, 100 lbs.

Depth, 18 in.

Price..... $17.50

Champion Chip Truck

No. 178.

This truck is just the thing for moving chips, sweepings, refuse, etc., etc.

16-gauge steel.

Wheels on roller bearings.

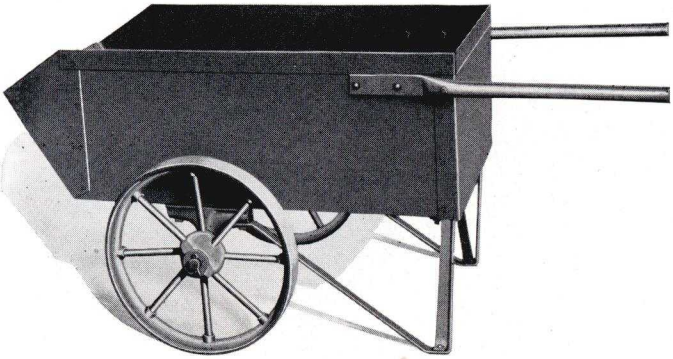
Specifications.

Length, 30 in.	Wheels, 18 x 2 in.
Width, 24 in.	Depth, 30 in.

No. 178, Price **$31.50**

Champion Shop Truck

Nos. 168 and 168 A.



A truck of greater capacity.

Large wheels mounted on roller bearings.

Specifications—No. 168.

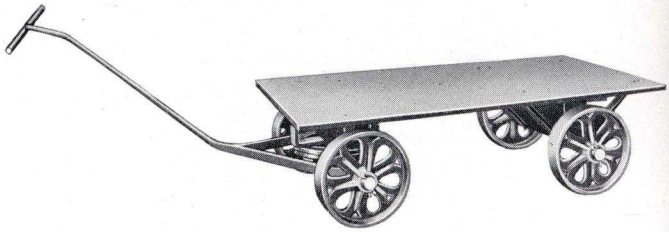
Length	40 in.
Width	20 in.
Depth	14 in.
Wheels	18x2 in.
Handles, from floor	24 in.
Greatest width from axle ends	27 in.
Weight	160 lbs.
Price	$30.00

Specifications—No. 168 A.

Length	34 in.
Width	18 in.
Depth	14 in.
Wheels	18x2 in.
Handles, from floor	24 in.
Greatest width from axle ends	26 in.
Weight	140 lbs.
Price	29.00

Champion Shop Truck

No. 154.



Made of 10-gauge sheet steel with edges turned 1½ inches, making the top exceptionally strong and durable; all-metal wheels mounted on ball-bearings and front wheel assembly swivels, so that truck turns in its own length.

Two-ton capacity.

Specifications.

Top, 30 x 48 inches.

Wheels, 10 x 2½ inches and built under.

Weight, 400 lbs.

Price..... $66.50

Champion Lift-Truck

No. 175.

Strongly built of iron and steel.

Front wheels swivel on thrust ball-bearings and all wheels on cage roller bearings.

One man can easily handle 2,000 lbs.

We guarantee our lift-truck for long wear and highly efficient service.

It is by far the best article of its kind on the market at the price. Turns in its own length, and the construction is such that pneumatic check is unnecessary.

Platform when raised, 7½ inches.

Platform when lowered, 6 inches.

Size of platform, 23 x 38 inches or as ordered.

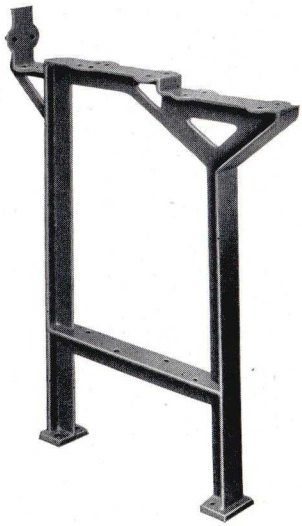
Weight, 265 lbs.

Price..... **$82.00**

Compare this price with that of other makes.

Champion Bench Leg

No. 171.



Made of grey iron; strongly built and of latest design; easily installed.

Dimensions.

Designed to accommodate 2-inch board at front and 1-inch at back. Provision is made for 5-inch siding to extend along rear of bench.

Height of lower bench stop, 31½ in.; upper stop, 32½ in.

Width, top ..... 30 in.

Width, bottom ..... 20 in.

Width, gross ..... 32 in.

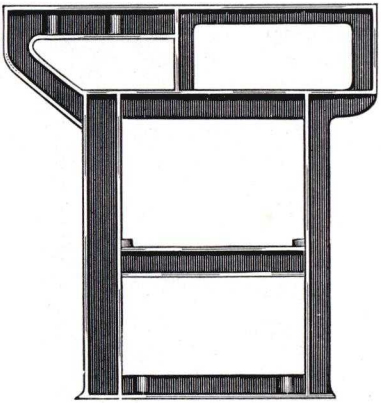
Provision for lower shelf, 9½ in. from floor.

Weight ..... 55 lbs.

Price $6.00

Champion Bench Leg

No. 172.



Made of grey iron; strongly constructed for heavy work; easily installed. Provisions made for shelving.

Dimensions.

Width, top	30 in.
Width, bottom	21 in.
Width, special shelf	15 in.
Height	32 in.
Weight	65 lbs.
Price	$7.25

Champion Bench Leg

No. 148.

This bench leg is made of heavy channel iron securely bolted together. The upper corners are reinforced as shown in illustration. The lower cross-piece will carry shelving and is adjustable.

Specifications.

Height	32 in.
Width at top	30 in.
Width at bottom	21 in.
Weight	35 lbs.
Price	$4.25

Champion Bench Leg

No. 149.

Double Bench Type.

Designed for a double bench. Provision is made for a center or dividing board; this, however, may be eliminated by merely dropping the center piece. Lower cross-piece will carry shelving and is drilled for adjustment.

This leg is of heavy angle iron. Upper corners reinforced with braces as shown.

Specifications.

Height	32 in.
Width at top	53 in.
Width at bottom	42 in.
Weight	60 lbs.
Price	$8.00

Champion Spring Shop Stool

No. 165.

This stool will meet your requirements. Seat-plunger works in hollow iron column and rides on spring. The column may be easily raised or lowered, and is held in position by set-screw in the base.

Base is of grey iron and may be screwed to the floor if so desired.

Specifications.

Seat, 14 inches in diameter.

Has 6-inch maximum adjustment for height.

Price..... $5.00

Champion Steel Rack

Nos. 157 and 157 A.

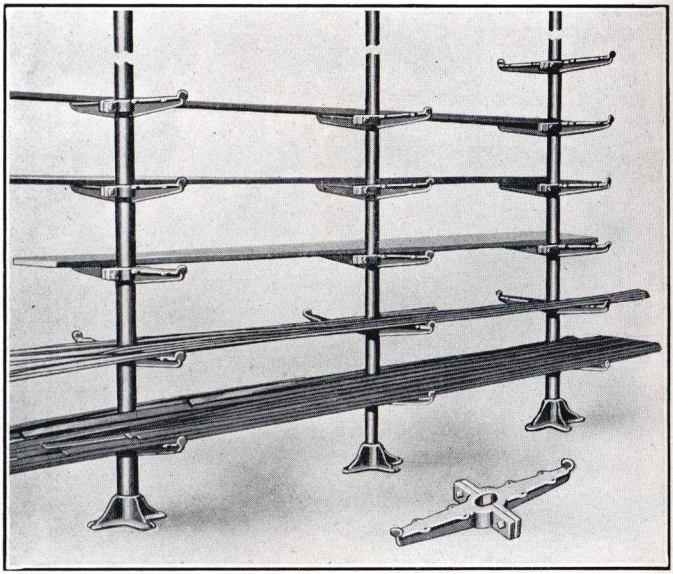
Made of grey iron.
Has twelve stationary arms.
Is rigid and strongly constructed.
Steel is easily racked and readily removed.
Will accommodate 25 tons of bar stock.

Specifications.

Distance between arms	5–6–7–9 in.
Length of arms	7–9–10–11–12 in.
Height	5 ft.
Weight, No. 157	265 lbs.
Weight, No. 157 A	175 lbs.
Price, No. 157	**$25.00**
Price, No. 157 A	**17.50**

Champion Adjustable Steel Rack

No. 169.



All grey iron. For bar stock or for shelving patterns, jigs, fixtures, etc., etc.

Made in single or double-arm type.

Arms are bolted to 2-inch pipe, and can be run up any height, and set in collar fastened to ceiling.

Shelves can be of steel or wood.

Base is of grey iron.

For wall-rack use single-arm type.

Specifications.

		Price
Double-arm type.		
Width, 24 in. (Two 12-inch arms)	Weight 14 lbs.	$2.25
Width, 48 in. (Two 24-inch arms)	Weight 22 lbs.	3.25
Base	Weight 15 lbs.	1.60
Ceiling collar	Weight 7 lbs.	.80
Single-arm Type.		
Width, 12-inch	Weight 7 lbs.	$1.20
Width, 24-inch	Weight 11 lbs.	1.60
Base	Weight 15 lbs.	1.60
Arm-clamp	Weight 3 lbs.	.55

Note.—We do not furnish pipe or shelving.

Champion Power Hack-Saw Stand
No. 165.

May also be used as a jack.

Maximum adjustment, six inches. Swivel head.

Specifications.

Base, diameter	14 in.
Height, extended	30 in.
Height, contracted	24 in.
Weight	80 lbs.
Price	**$13.50**

Champion Caster Wheels

Nos. 1, 2 and 3.

No. 1.

No. 3.

No. 2.

Many of our customers have asked us from time to time for information relative to the wheels we manufacture for use in connection with our shop furniture. We therefore show the above for your approval.

Made of grey iron, strongly constructed and "built for service".

Specifications.

No. 1 Champion Caster Wheel.

Wheel ..... 5x1½ in.
Weight ..... 5 lbs.
Caster of plunger and socket type.

No. 2 Champion Caster Wheel.

Wheel ..... 5x1½ in.
Weight ..... 6½ lbs.
Caster of ball bearing type.

No. 3 Champion Caster Wheel.

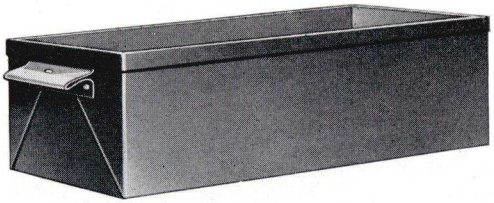
Wheel ..... 6¾x1½ in.
Weight ..... 14½ lbs.
Caster of plunger and socket type.

NOTE.—Should wheels as listed fail to meet your requirements, we will be pleased to quote "right price" upon receipt of your specifications.

Price.

	Each
No. 1	$1.55
No. 2	2.25
No. 3	2.25

Champion Steel Boxes



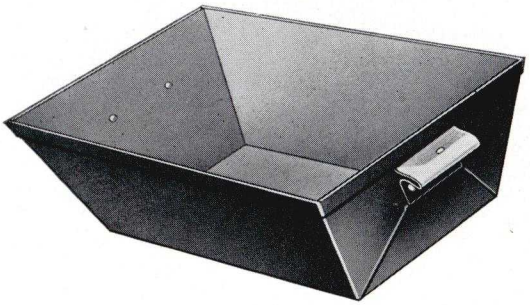
For stock-rooms and shops. Made as below and in different gauges of steel, to meet all requirements. Triple-folded ends and sides, and especially strengthened corners. Furnished with steel handles, as shown in illustration.

Standard Sizes.

No.	Length	Width	Height	Gauge
0	13½ in.	6 in.	4½ in.	20
1	13½ in.	6 in.	4½ in.	18
2	16½ in.	6 in.	4½ in.	20
3	16½ in.	6 in.	4½ in.	18
4	22½ in.	6 in.	4½ in.	20
5	22½ in.	6 in.	4½ in.	18
6	13½ in.	9 in.	4½ in.	20
7	13½ in.	9 in.	4½ in.	18
8	16½ in.	9 in.	4½ in.	20
9	16½ in.	9 in.	4½ in.	18
10	22½ in.	9 in.	4½ in.	20
11	22½ in.	9 in.	4½ in.	18
12	13½ in.	9 in.	7¼ in.	20
13	13½ in.	9 in.	7¼ in.	18
14	16½ in.	9 in.	7¼ in.	20
15	16½ in.	9 in.	7¼ in.	18
16	22½ in.	9 in.	7¼ in.	20
17	22½ in.	9 in.	7¼ in.	18
18	16½ in.	12 in.	4½ in.	20
19	16½ in.	12 in.	4½ in.	18
20	22½ in.	12 in.	4½ in.	20
21	22½ in.	12 in.	4½ in.	18
22	22½ in.	12 in.	7¼ in.	20
23	22½ in.	12 in.	7¼ in.	18

Let us quote you.

Champion Steel Tapered Shop Boxes



These boxes are very strong, durable and more convenient than the rectangular style, as they will nest when not in use, thus requiring very little storage room.

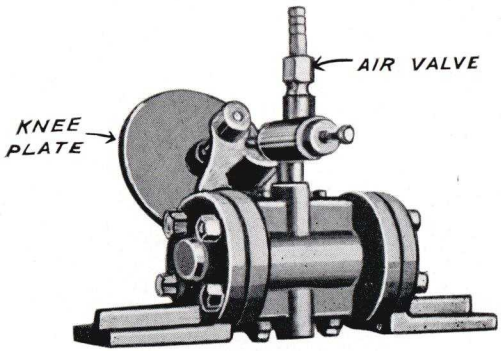
They have the same top seam and handles as the rectangular style.

No.	Length Inches	Width Inches	Depth Inches	Gauge
24 Top	18	12	6½	20
Bottom	16	10		
25 Top	18	12	6½	18
Bottom	16	10		
26 Top	18	12	6½	16
Bottom	16	10		
27 Top	20	12	6½	20
Bottom	18	10		
28 Top	20	12	6½	18
Bottom	18	10		
29 Top	20	12	6½	16
Bottom	18	10		

Special sizes to order. Let us quote you.

Champion Moulder's Bench

Fitted With Vibrator.



Champion Moulder's Bench

Is designed and built for the Pneumatic Rapper, but will be furnished with or without it.

However, it must be conceded that the "Simultaneous-Lift-and-Uniform-Rap" is not only best and correct, but essential to insure uniform and true-to-pattern work—a combination most conspicuously embodied in the Champion.

The bench is in itself unique in design, workmanship and material. The bow-frame is made of wrought-iron pipe, size outside diameter, 1⅜ inches; the braces are of the same material, one size smaller.

The construction affords the greatest strength, eliminates weight, leaves the least chance for the sand to lodge, and by noting the cut it will be observed that not a brace is placed in the way of the workman's shovel.

The frame is rigid, as if cast in one piece. The skids are guaranteed to carry 1,000 pounds, and the side shelves 200 pounds each.

The skids are 30 inches from the floor; if specified, any other height will be furnished without extra charge.

The Brackets "C" are adjustable and afford a convenient place to set the cope or match plate. Also the Tool-Shelf "A" may be set at any desired height. The Side-Shelves "D" are interchangeable; one is 3 feet and the other 2 feet long; both are sheet steel.

The wheels are 4 feet apart, so that the machine carries nicely astride the sand.

Vibrator.

The Pneumatic Rapper "F" is fitted with an adjustable valve and may be changed and set to run with a heavy or light vibration, as the work may require. The valve is opened by the knee.

The Champion Vibrator is especially strong and has great merit; it is made with double inlets and ports, which insures positive action. Made in two sizes.

Weight of Bench and Vibrator, 125 lbs.

Sizes and Prices.

Combination Bench and Pneumatic Vibrator, 1¼" complete as shown	$32.50
Bench complete as shown, without Pneumatic Vibrator	20.00
Champion Vibrator, size 1¼"	12.50
Champion Vibrator, size 1¾"	15.00

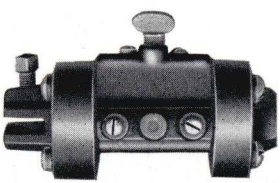
All F. O. B. Springfield, Ohio.

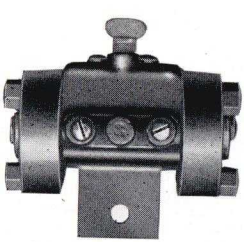
Champion Vibrators

These vibrators are made for service. Every vibrator is guaranteed against any defect in material or workmanship. All vibrators have double ports and inlets.

No. 1 is designed particularly for small plate-moulding.
5/8 or 3/4-inch plunger, as ordered.
Length, 4 1/4 inches.
Diameter, 1 5/8 inches.
Ends of malleable iron.
Price, $8.00.

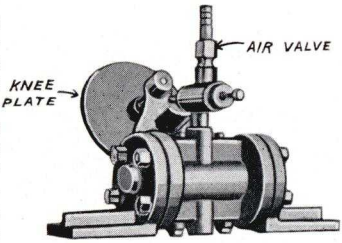
No. 2 is intended for heavy plate-moulding; will clamp anywhere on plate.
3/4 or 7/8-inch plunger, as ordered.
Length, 5 inches.
Diameter, 2 inches.
Price, $10.00.





No. 3 is similar to No. 2, but is bolted to plate instead of being secured with clamps.
3/4 or 7/8-inch plunger, as ordered.
Length, 5 inches.
Diameter, 2 inches.
Price, $10.00.

No. 4 The pneumatic rapper "F" is made in two sizes; is equipped with an adjustable valve, and may be regulated for heavy or light vibrations as the work may require. The valve is opened by the knee. This vibrator is exceptionally strong and thoroughly efficient. Is made with double inlets and ports, which insures positive action.



Price, 1 1/4-inch.....$12.50
Price, 1 3/4-inch..... 15.00

Western Adjustable Vise

Note These Points of Superiority:
Simple—Durable—Accurate.

The Western Adjustable Vise will easily handle any odd-shaped work as well as ordinary shapes.

It is more quickly and easily positioned than any other vise. The work can be kept in proper position before the eyes of the workman in the best light without the necessity of stooping or other tiresome and awkward attitudes at the bench. A long stride toward correct work.

There is no excuse for spoiled work on account of not seeing lines. Accuracy is more nearly assured.

Any piece of work can be reached from all directions without a cramped position for the workman, adding comfort and convenience to the job, thus increasing the output. More assurance of accurate results.

There is no limit to the number of positions within range of vise, either in swiveling or elevating. The swivels will never wear loose, and there is no lost motion from loose dowel pins.

Only one locking lever is required for all swivels. The vise automatically holds its vertical position by a locking collar while swiveling, and the one lever tightens all parts rigidly in the working position. The vise cannot jump or rattle when chiseling or hammering, as all parts are clamped together.

No mutilation of bench is necessary in attaching the Western Vise. It extends from the bench, giving easier access to the work and greater convenience to the screw lever. The collar support abuts the edge of the bench and takes the strain off the lag screws when chiseling or hammering is being done.

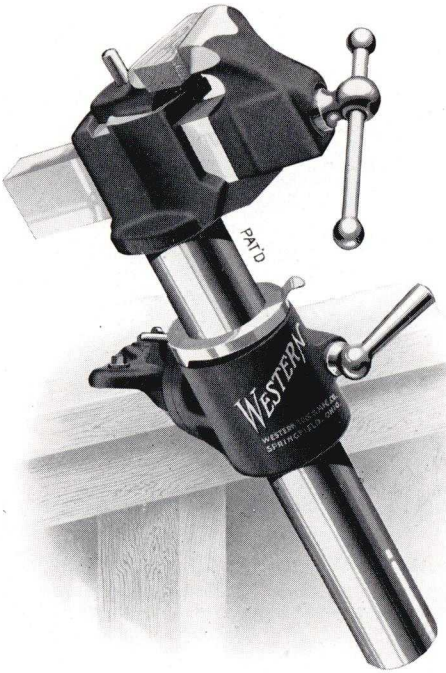
This is the handsomest vise. It is designed along true mechanical lines with efficient devices for all functions. There is no excess of weight. All parts are of greater strength than those of the old-style vises and are so gracefully proportioned that when assembled into the complete vise the appearance is that of a finished tool.

The material used in its construction is the best for the purpose that experience has proven and money can buy.

We boast of the workmanship on the Western Vise. It is unexcelled. Special machines with specialists to run them make the vise what it is.

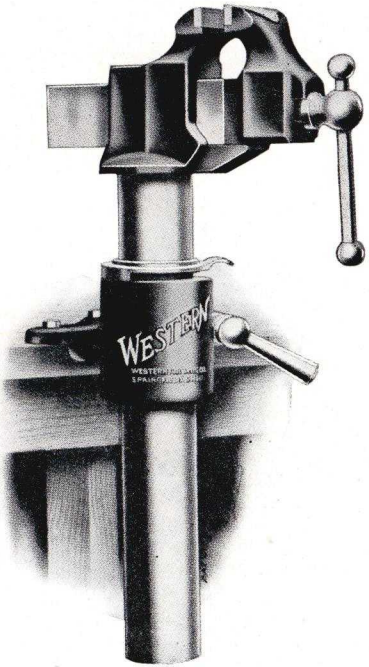
Western Adjustable Vise

"The Vise With Virtue."



Thoroughly Universal.

Western Adjustable Vise

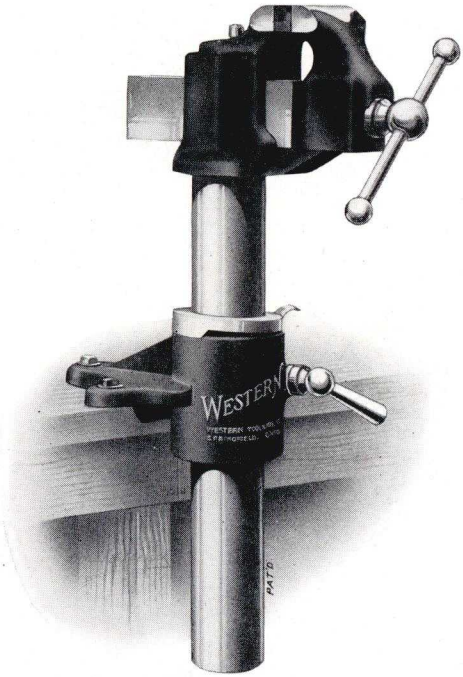


Style A. Solid Base, Solid Jaw.

No.	Style	Width of Jaw	Jaw Opens	Weight	Price
0	A	1¾	2½	10	$10.00
1	A	2½	3½	28	12.50
2	A	3	4	35	15.00
3	A	3½	5	55	17.25
4	A	4	5½	65	20.00
5	A	4½	7	90	24.00

Attached without mutilating bench.
In ordering parts our vise number must be given.

Western Adjustable Vise

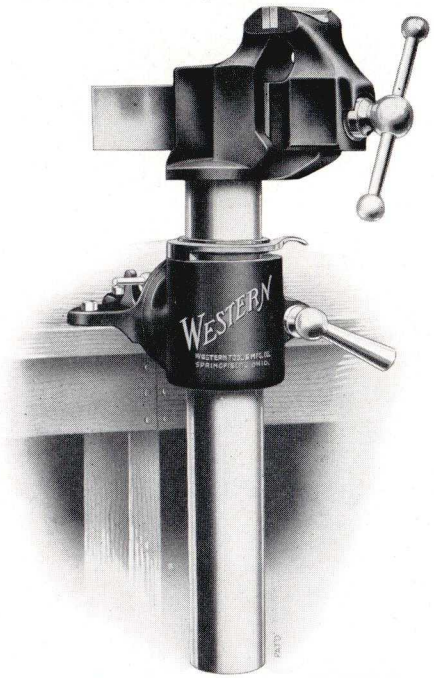


Style B. Solid Base, Swivel Jaw.

No.	Style	Width of Jaw	Jaw Opens	Weight	Price
0	B	1¾	2½	10	$12.50
1	B	2½	3½	29	16.00
2	B	3	4	37	20.00
3	B	3½	5	57	23.00
4	B	4	5½	67	26.25
5	B	4½	7	95	30.25

Don't stoop; raise the vise.
In ordering parts our vise number must be given.

Western Adjustable Vise

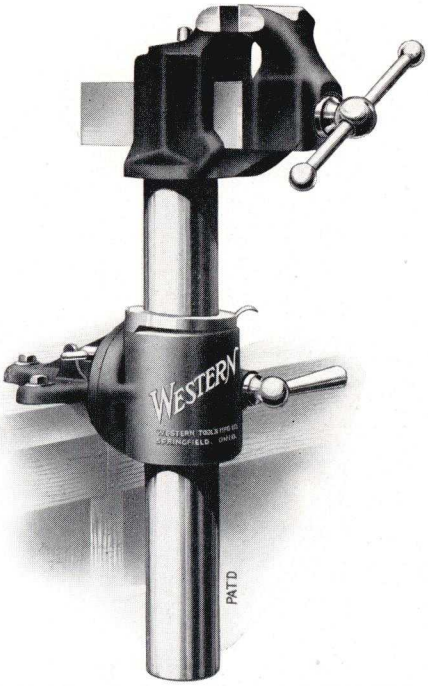


Style C. Swivel Base, Solid Jaw.

No.	Style	Width of Jaw	Jaw Opens	Weight	Price
0	C	1¾	2½	15	$12.50
1	C	2½	3½	31	16.00
2	C	3	4	38	20.00
3	C	3½	5	63	23.00
4	C	4	5½	74	26.25
5	C	4½	7	95	30.25

Locks with one lever.
In ordering parts our vise number must be given.

Western Adjustable Vise



Style D. Swivel Base, Swivel Jaw.
Complete Universal.

No.	Style	Width of Jaw	Jaw Opens	Weight	Price
0	D	1¾	2½	15	$16.00
1	D	2½	3½	32	20.00
2	D	3	4	40	24.00
3	D	3½	5	65	26.00
4	D	4	5½	76	30.00
5	D	4½	7	95	35.00

Stays where it is set.
In ordering parts our vise number must be given.

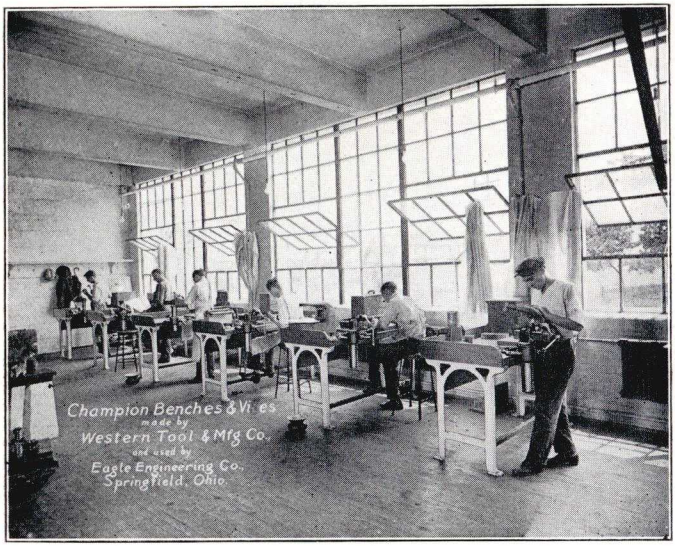


Illustration shows Western Adjustable Vise equipment in a modern tool-room.

Western Machinists' Vise

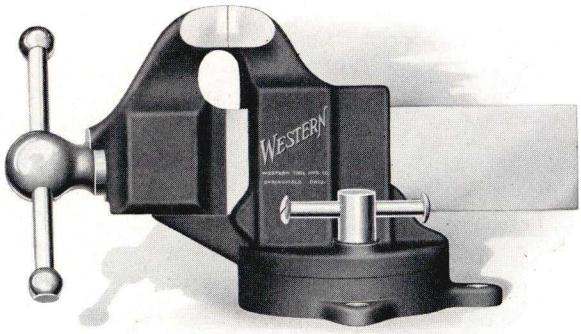
Solid Jaw, Stationary Base.

Made of semi-steel, which is a guarantee against breakage. Has all the requirements needed to make it preferable.

Vise No.	Width of Jaw Inches	Opens Inches	Depth Inches	Weight Pounds	List Price Each
10	2½	3½	2⅜	17	$ 9.00
11	3	4½	2¾	25	10.00
12	3½	5	2⅞	30	11.25
13	4	6	3½	45	12.75
14	4½	7	3⅝	60	15.50
15	5	8	3¾	75	20.00
16	5½	9	4	105	30.00
17	6	10	5¼	150	39.00
18	7	12	5⅝	190	55.00
19	8	12	5¾	250	75.00
20	9	13	5⅞	290	90.00

In ordering parts our vise number must be given.

Western Machinists' Vise



Solid Jaw, Swivel Base.

Made of semi-steel. Has all the needed requirements to make it a first-class Swivel Base Vise.

Vise No.	Width of Jaw Inches	Opens Inches	Depth Inches	Weight Pounds	List Price Each
30	2½	3½	2⅜	20	$12.00
31	3	4½	2¾	30	13.00
32	3½	5	2⅞	36	15.00
33	4	6	3½	55	17.00
34	4½	7	3⅝	70	20.00
35	5	8	3¾	90	30.00
36	5½	9	4	120	38.00
37	6	10	5¼	170	52.00
38	7	12	5⅝	210	70.00
39	8	12	5¾	280	98.00
40	9	13	5⅞	320	115.00

In ordering parts our vise number must be given.

Western Machinists' Vise

Swivel Jaw, Stationary Base.

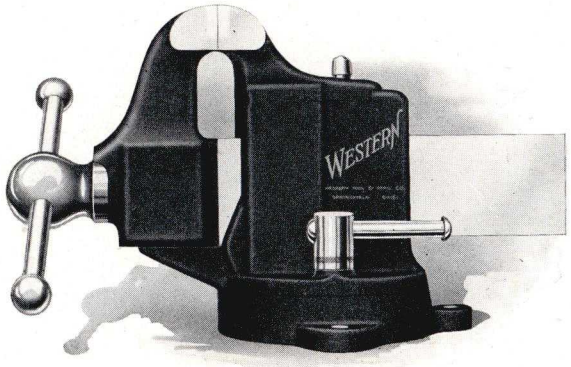
Made of semi-steel.

Permits the holding of irregular shapes.

Vise No.	Width of Jaw Inches	Opens Inches	Depth Inches	Weight Pounds	List Price Each
41	2½	3½	2⅜	18	$13.50
42	3	4	3	26	15.00
43	3½	5	3⅜	33	16.00
44	4	6	3¾	52	19.00
45	4½	7	3⅞	60	22.00
46	5	8	4	85	28.00
47	5½	8½	4¾	110	35.00
48	6	9½	5⅜	150	50.00
49	7	12	6	200	65.00
50	8	12½	6¼	270	90.00

In ordering parts our vise number must be given.

Western Machinists' Vise



Swivel Base, Swivel Jaw.

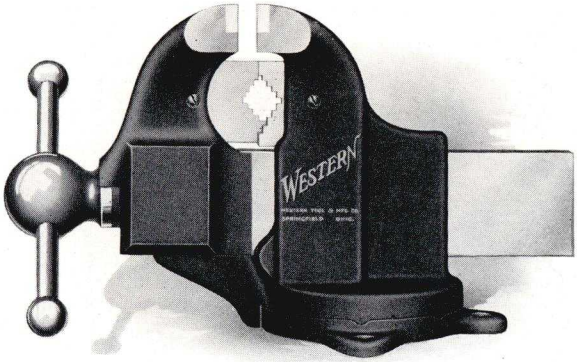
Made of semi-steel.

This vise has same perfect features as our Stationary Base, Swivel Jaw Vise.

Vise No.	Width of Jaw Inches	Opens Inches	Depth Inches	Weight Pounds	List Price Each
51	2½	3½	2⅜	22	$16.00
52	3	4	3	32	17.50
53	3½	5	3⅜	40	20.00
54	4	6	3¾	60	24.00
55	4½	7	3⅞	72	28.00
56	5	8	4	95	35.00
57	5½	8½	4¾	130	44.00
58	6	9½	5⅝	160	60.00
59	7	12	6	220	75.00
60	8	12½	6¼	290	105.00

In ordering parts our vise number must be given.

Western Machinists' Vise



Extra Heavy Combination Pipe Jaw, Swivel Base.

Made of semi-steel.

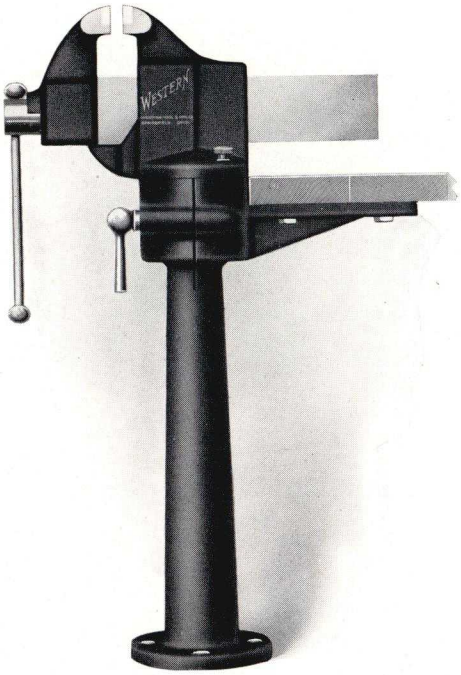
This makes a very desirable vise for either machine shop or steam fitting service.

Pipe jaws are milled from solid steel bars, and can be removed by loosening set screws.

Vise No.	Width of Jaw Inches	Holds Pipe Inches	Weight Pounds	List Price Each
60	4 in.	⅛ to 2½ in.	62 lbs.	$20.00
61	4½ in.	⅛ to 3½ in.	88 lbs.	25.00
62	5 in.	⅛ to 4½ in.	130 lbs.	30.00
63	6 in.	⅛ to 6 in.	185 lbs.	36.00

In ordering parts our vise number must be given.

Western Machinists' Vise



Extra Heavy Swivel Base, With Supporting Column.

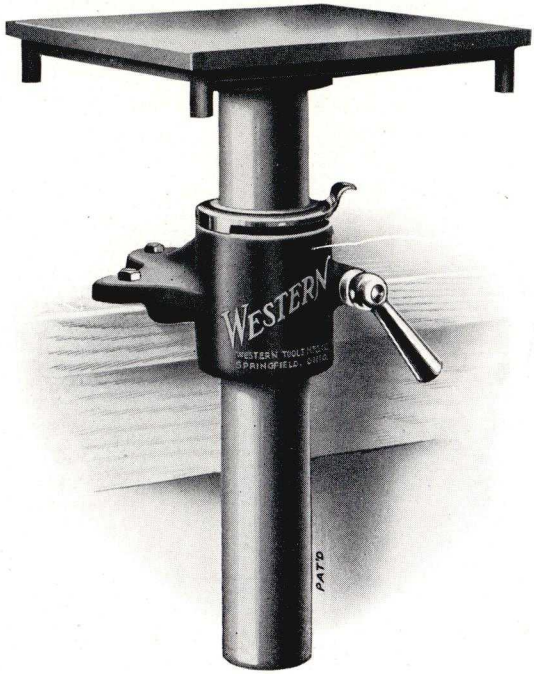
This construction of vise and supporting column has solved the problem and permits the use of extra heavy vises on a bench. This vise has a stem which rests in supporting column. Swivels and locks rigidly.

Vise No.	Width of Jaw Inches	Opens Inches	Weight Pounds	List Price Each
70	6 in.	10 in.	300 lbs.	$75.00
71	7 in.	12 in.	340 lbs.	100.00
72	8 in.	12 in.	400 lbs.	125.00
73	9 in.	13 in.	440 lbs.	150.00

In ordering parts our vise number must be given.

**This illustrates our line inclusive.
Invaluable for heavy work.
Patented.**

Western Surface Table



Furnished complete with base. Table round or square, as ordered. No. 1 round and square surface table stems will fit into Western Adjustable Vise bases Nos. 0, 1 and 2, all styles. No. 3 round and square surface table stems will fit into Western Adjustable Vise bases Nos. 3, 4 and 5, all styles.

Western Surface Table

A Brand-New Handy Accessory.

For the use of die makers, metal pattern makers, linotype and monotype machinists, repair men in plants using small machinery and for a general purpose surface table.

It can be used in base to elevate the work to a desired position, or may be used on the bench detached from stem.

When base is used, table may be elevated to desired height and locked into position. Table, when detached from stem, may be used on the bench.

This device will prove more valuable than it appears at a casual glance, and is worth more than the price listed.

Price List of Western Surface Table.

No.	Style	Size	Plate and Stem only	Plate, Stem and Base Complete		Weight Complete	
				Solid Base	Swivel Base	Solid Base	Swivel Base
1	Round	10 in.	$3.00	$5.00	$ 7.00	25½	28
	Square	10 x 10 in.	4.00	6.00	8.00	27½	39
3	Round	12 in.	5.00	7.00	9.00	49	57
	Square	12 x 12 in.	6.00	8.00	10.00	53	61

Our Guarantee.

We have such confidence in the merit of the Western Vises and Surface Table that we are willing to "go one better" than the old money-back-plan and send either to responsible parties on approval. If our goods do not "make good" we stand all expenses after your trial, even to the transportation.